

SONY

KV1984AS

MODEL

SERVICE MANUAL


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WARNING !!

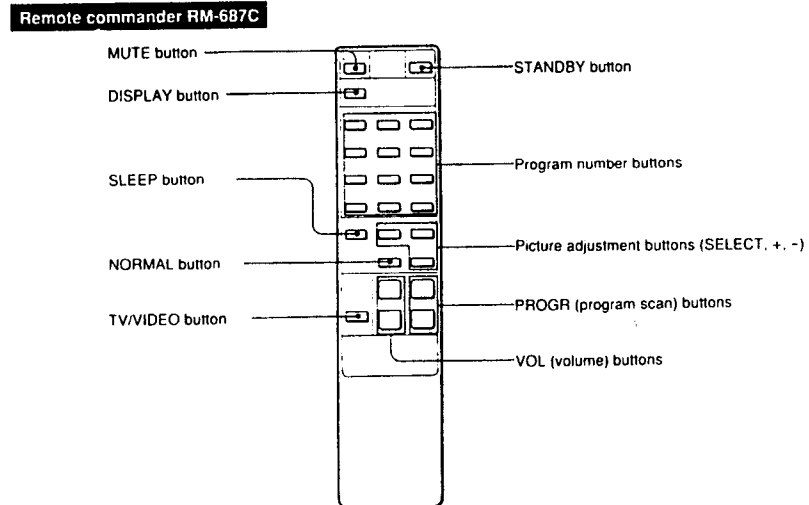
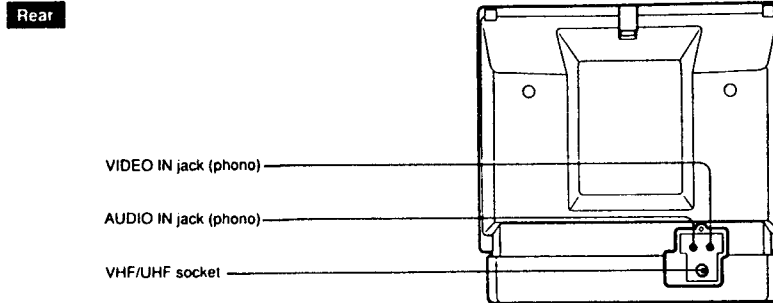
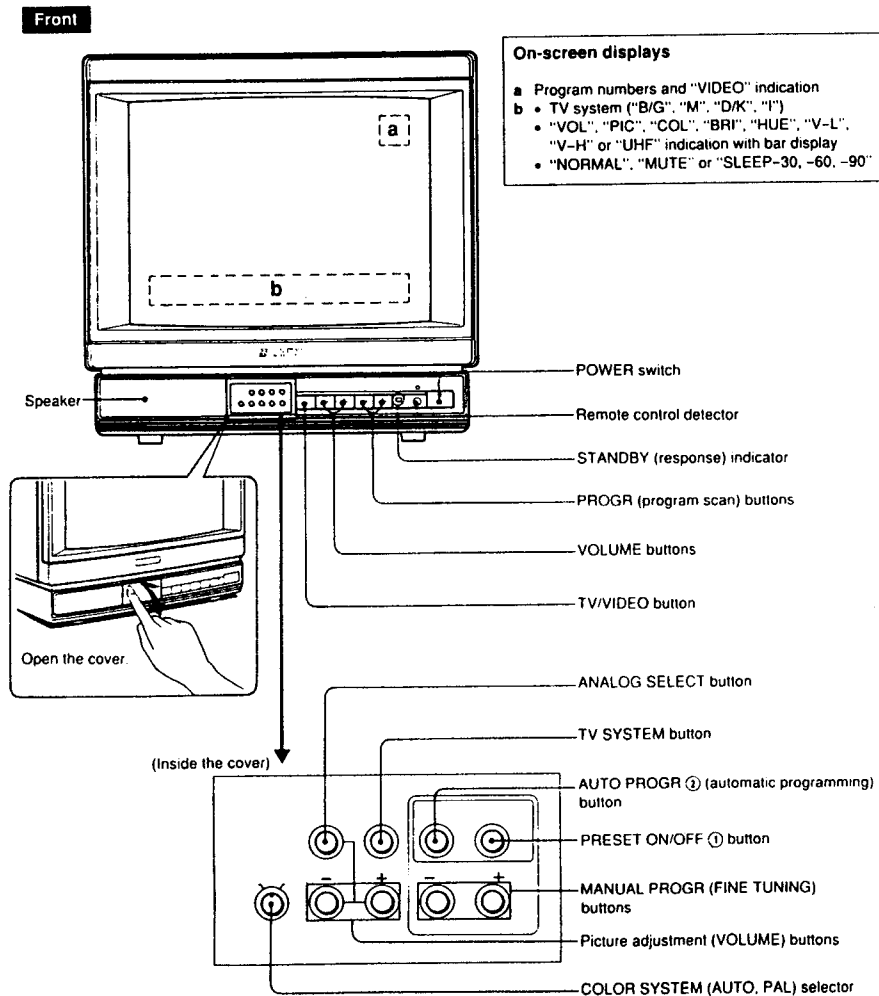
AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

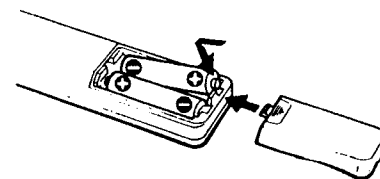
SECTION 1 GENERAL

1-1. PARTS IDENTIFICATION



Battery installation

Insert the supplied two R6 (size AA) batteries with correct polarity.

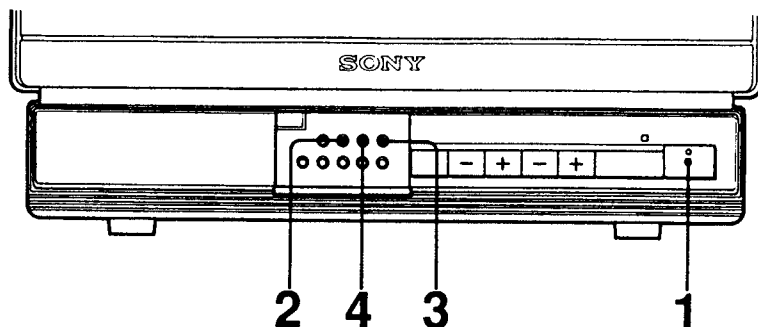


Notes on batteries

- In normal operation, batteries will last up to half a year. If the unit does not operate properly, the batteries might be exhausted. Replace them with new ones.
- To avoid damage from possible battery leakage, remove the batteries for extended unused periods.

1-2. PRESETTING THE RECEIVABLE CHANNELS

Automatic Presetting



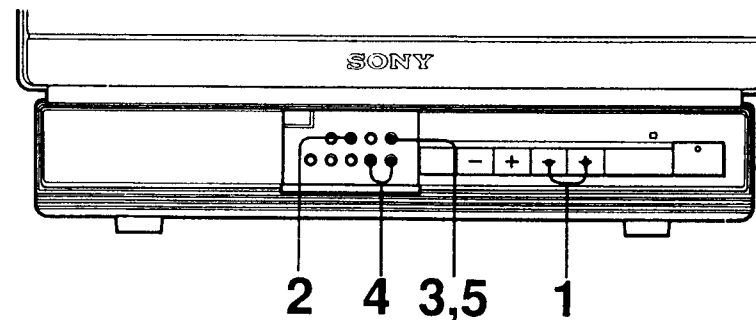
- 1 Turn the TV on.**
- 2 Select the TV system.** (See page 8.)
- 3 Press PRESET ON/OFF.**

- 4 Press AUTO PROGR.**

Up to 30 receivable channels are preset in numerical sequence beginning from program number 1. When all receivable channels are preset, the program number 1 lights steadily on the screen and the programming mode is automatically released.

While presetting, the program numbers blink.

Manual Presetting



To change the order of a channel which was set earlier, use manual presetting. Also use manual presetting to set channels with weak signals, as the unit is designed to memorize only channels with fairly strong signals when automatically presetting the receivable channels.

- 1 Press PROGR** to select the desired Program position.
- 2 Set the TV system.**
- 3 Press PRESET ON/OFF.** Program number on the screen blinks. A colored segmented bar appears to indicate approximate location of the channel being tuned in.
- 4 Press MANUAL PROGR (FINE TUNING)** repeatedly until the desired channel appears.
 to scan higher-frequency channels
 to scan lower-frequency channels
- 5 Press PRESET ON/OFF again.**

Repeat steps 1 through 5 for other desired channels.

Selecting the TV system

Select the proper TV system that can be received in your area. Each time TV SYSTEM is pressed, the indications appear in the following order:

B/G → M → D/K → I

B/G: West European TV system
M: American TV system
D/K: East European TV system
I: British TV system

Notes

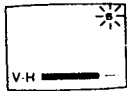
- If more than one TV system can be received in your area, select the main TV system of the area. All receivable channels can be preset in the selected TV system. Resetting of TV system is described in "Watching TV programs".
- Wrong setting of the TV system causes the distorted, or noisy sound, or abnormal color.
- The TV system setting is memorized for each program position. Therefore, the TV system can be reset for only the desired program position without affecting other program positions.

1-3. WATCHING TV PROGRAMS

Skipping Unused Program Positions

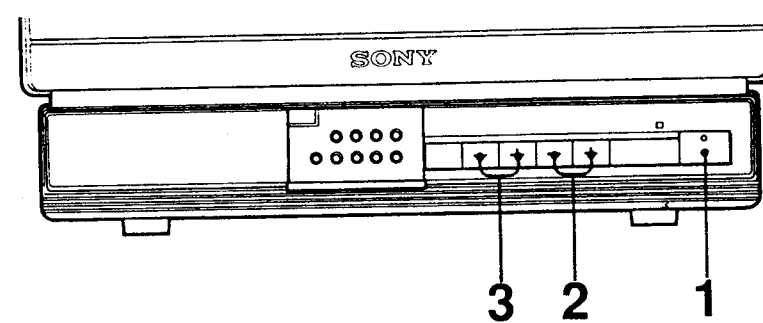
After presetting channels, unused or undesired program positions can be skipped.

- 1** Turn the TV on.
- 2** Press PRESET ON/OFF.
Program number on the screen blinks.
A colored segmented bar appears to indicate approximate location of the channel being tuned in.
- 3** Press PROGR to select the position to be skipped.
- 4** Press NORMAL on the commander.
Repeat steps 3 and 4 for other positions to be skipped.
- 5** Press PRESET ON/OFF.

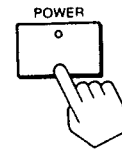


Restoring the skipped channel

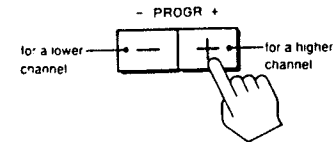
- 1** Select the position to be restored using the program number button on the commander.
- 2** Perform steps 2 through 5 in "Manual presetting".
Otherwise, perform automatic presetting and reset all channels.



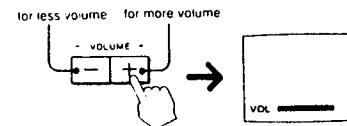
- 1** Turn the TV on.



- 2** Select the desired channel.



- 3** Adjust the volume.



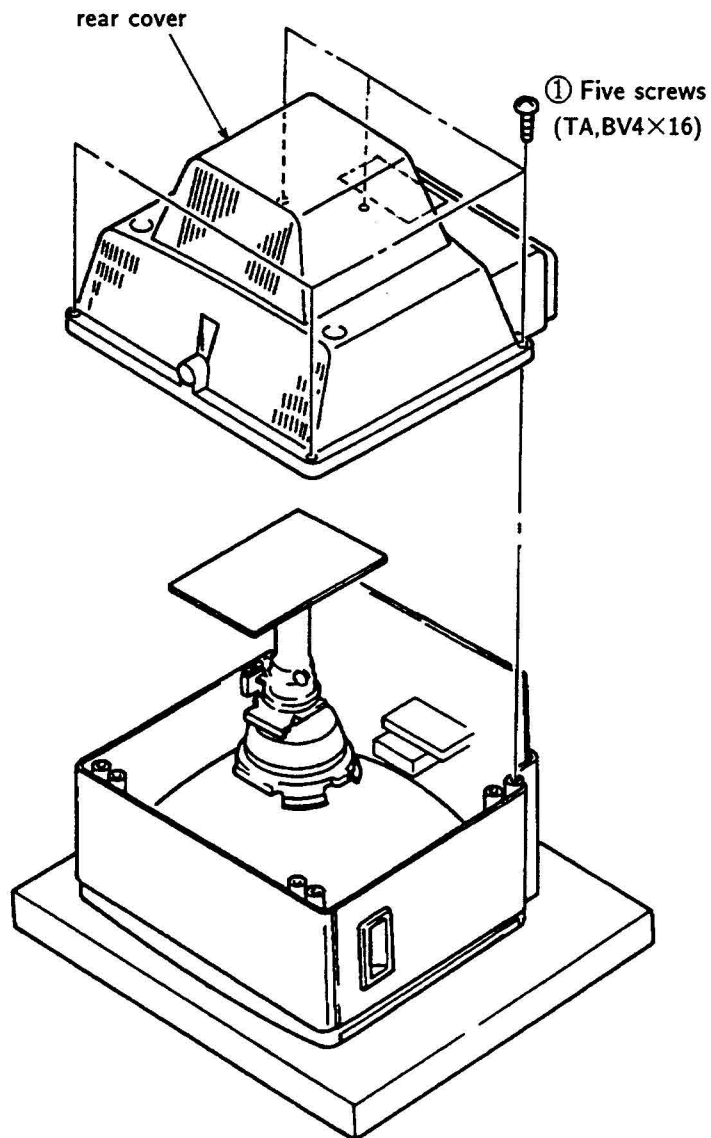
	Commander	TV
To turn off the TV for a short period of time	Press STANDBY.	—
To turn on the TV from the standby mode	Press a program number or PROGR buttons	Press PROGR + or - button.
To cut off the power completely	—	Press POWER.
To keep the channel display (program number and "VIDEO" indication) on the screen	Press DISPLAY.	—
To turn off the program number display	Press DISPLAY.	—
To display the TV system indication	Press DISPLAY.	Press TV SYSTEM.

The STANDBY (response) indicator blinks when the button on the TV or on the commander is pressed. It lights steadily when the TV is turned off with the STANDBY button on the commander.

SECTION 2 DISASSEMBLY

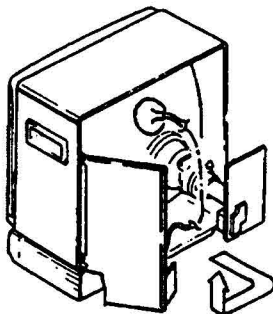
2-1. REAR COVER REMOVAL

Note: Follow the disassembly procedure in the numerical over givem.



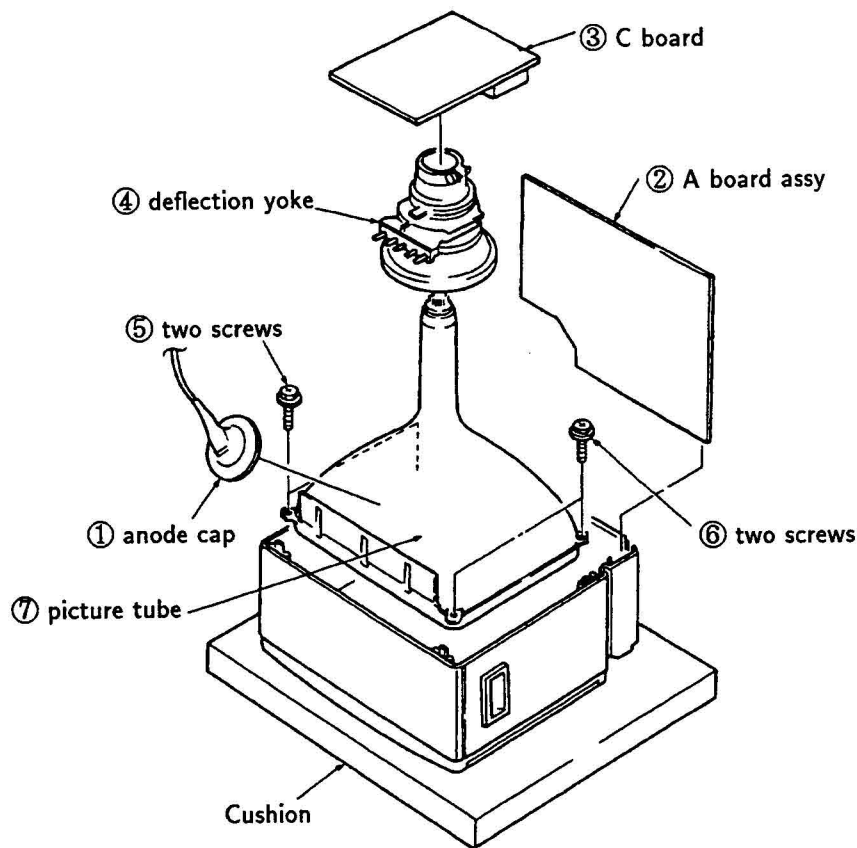
SERVICE POSITION FOR A BOARD

A board
Pull out A block assy
to the direction shown
by the arrow.

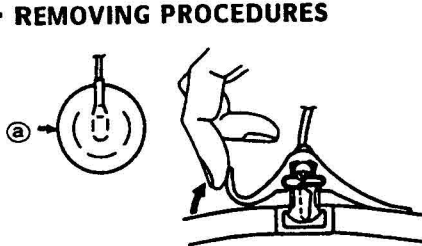


CAUTION :
Do not place the control volumes and
switches down to the working bench.
It is fragile.

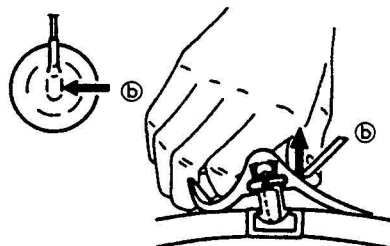
2-2. PICTURE TUBE REMOVAL



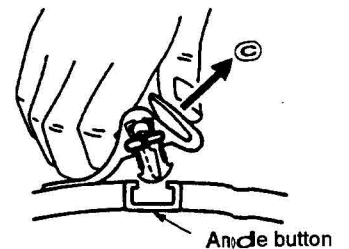
• REMOVAL OF ANODE-CAP • REMOVING PROCEDURES



- ① Turn up one side of the rubber cap in the direction indicated by the arrow ①.



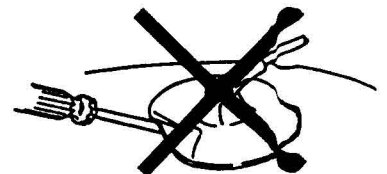
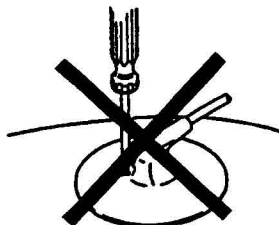
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.



- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3

SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switch should be set as follows unless otherwise noted :

PICTURE controlnormal
BRIGHTNESS controlnormal

Preparation:

- Feed in the white pattern signal.
- Before starting, degauss the entire screen.

3-1. BEAM LANDING

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.2
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. (Fig.3)
5. Move the deflection yoke forward, and adjust so that the entire screen becomes green. (Fig.1)
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corner is not right, adjust by using the disk magnets. (Fig.4)

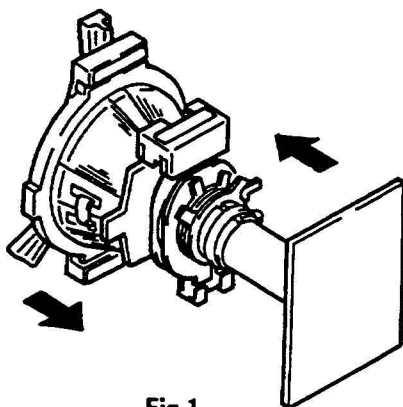


Fig.1

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note: Test Equipment Required.

1. Color bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter

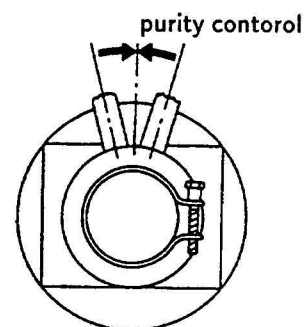


Fig.2

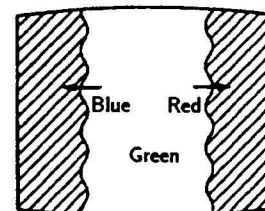


Fig.3

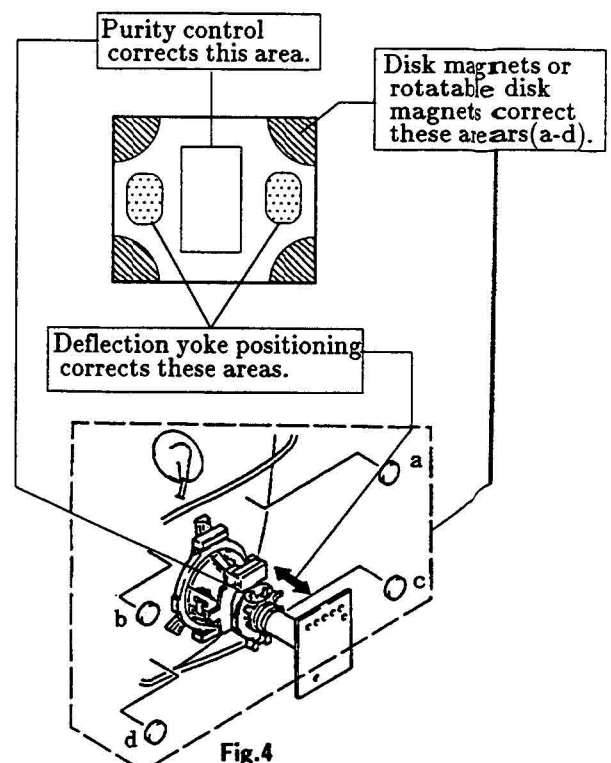


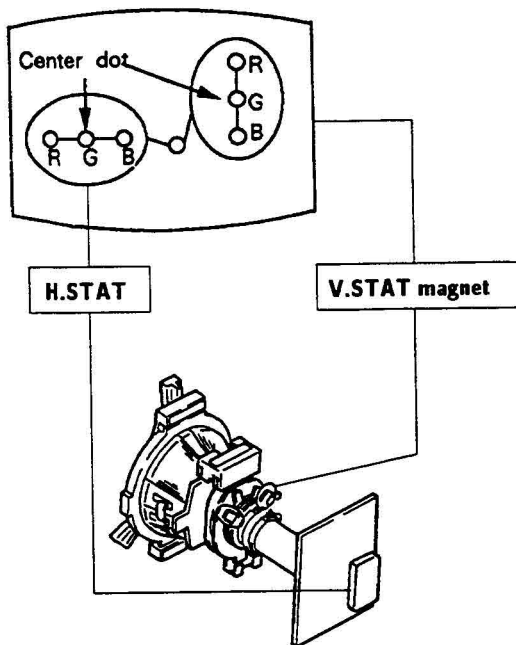
Fig.4

3-2. CONVERGENCE

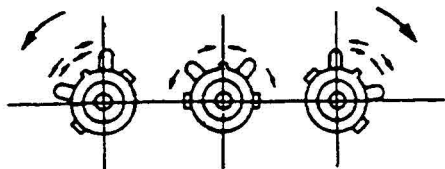
Preparation:

- Before startin,perform FOCUS, H.SIZE, V.LIN and V.SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in dot pattern.

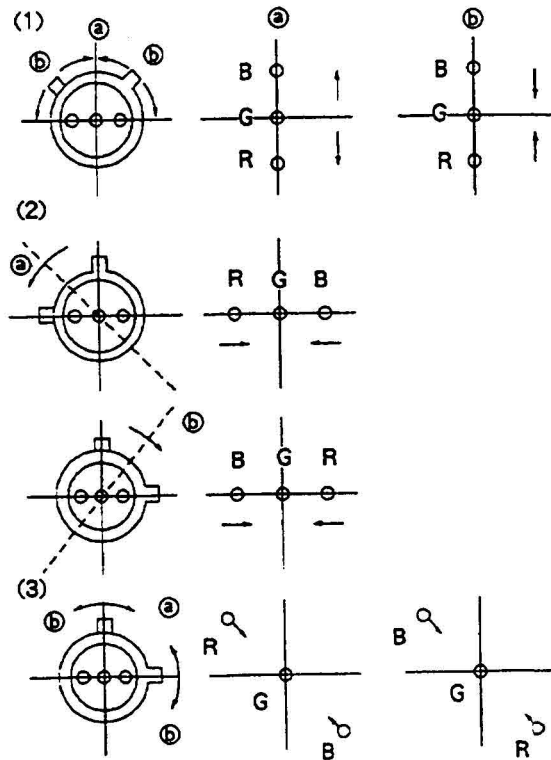
(1) Horizontal and Vertical Static Convergence



1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen.(Horizontal movement)
 2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
 3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizon-tal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)
- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4. When the V.STAT magnet is moved in the direction of arrow (a) and (b), red, green and blue dots move as shown below.

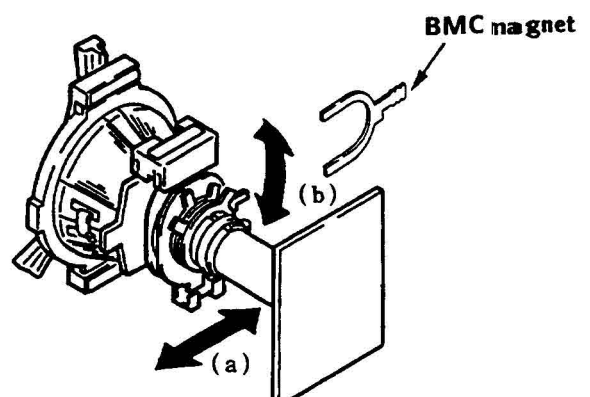


If the blue dot does not converge with red and green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

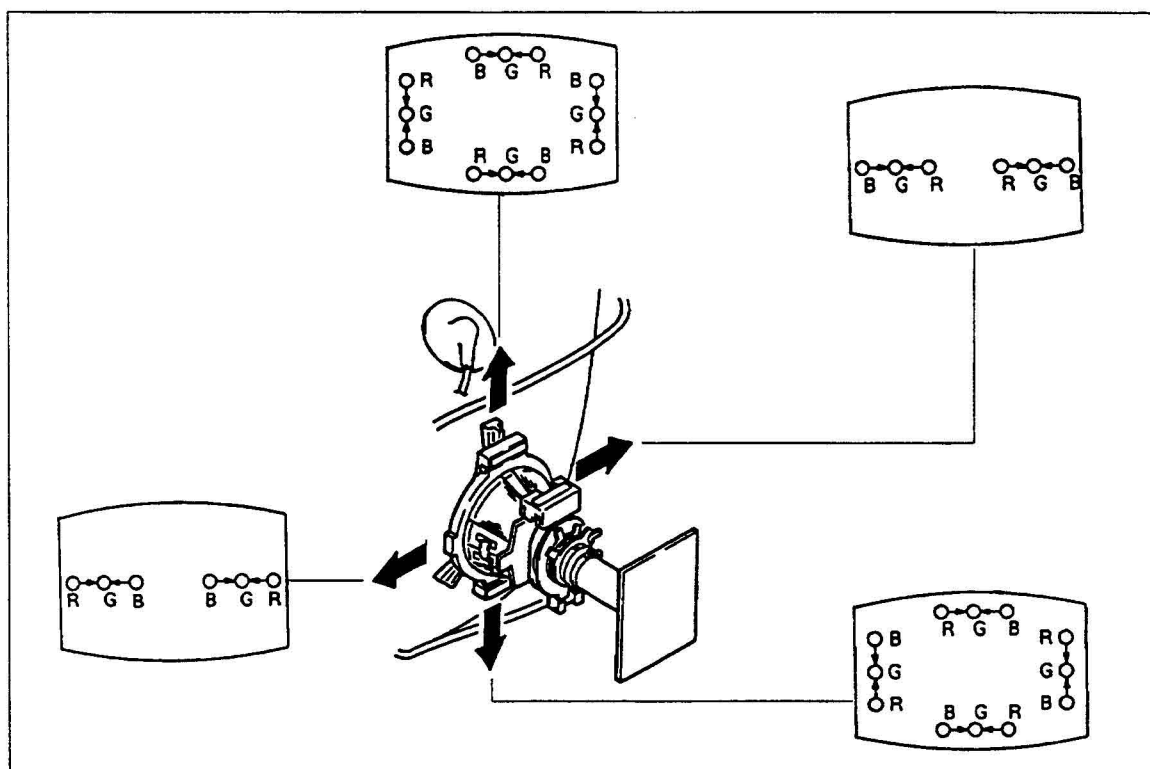


(2) Dynamic Convergence Adjustment

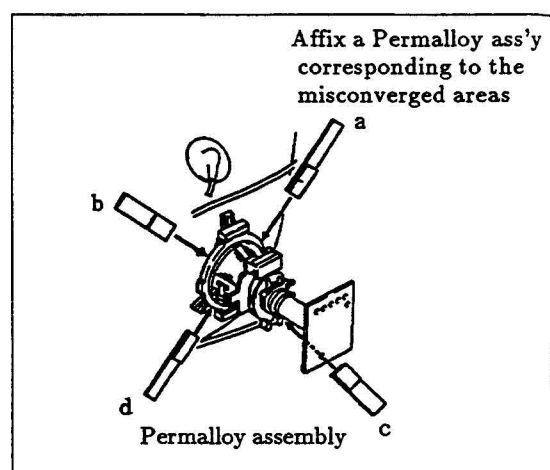
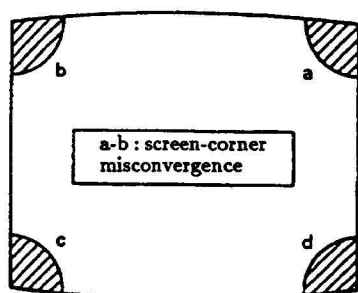
Preparation:

- Before starting perform Horizontal and Vertical static convergence Adjustment.
- 1. Slightly loosen deflection yoke screw.
- 2. Remove deflection yoke spacers.

- 3. Move the deflection yoke for best convergence as shown below.
- 4. Tighten the deflection yoke screw.
- 5. Install the deflection yoke spacers.

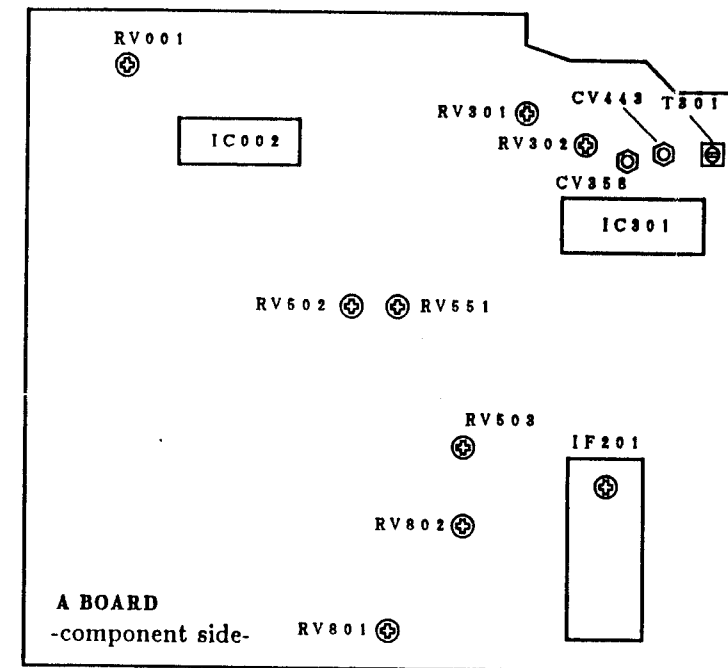
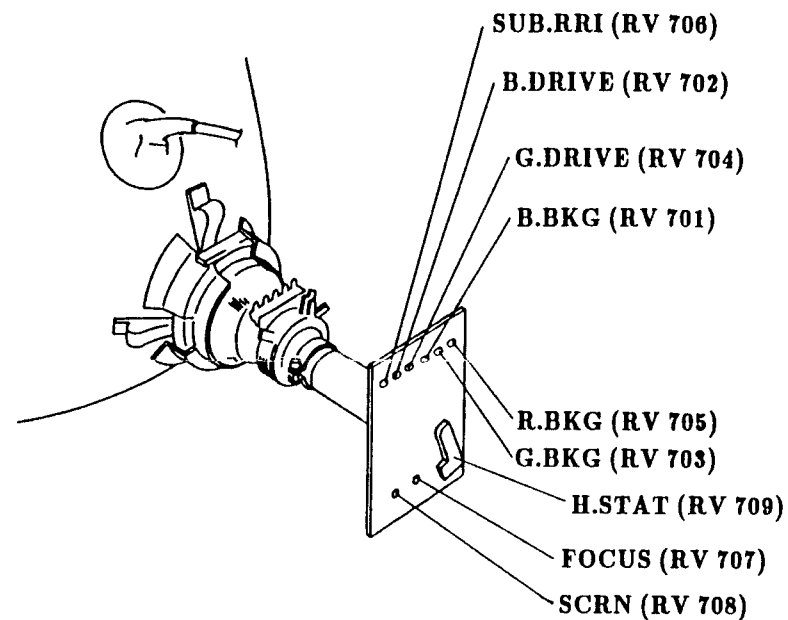


(3) Screen-corner Convergence



SECTION 4 CIRCUIT ADJUSTMENTS

4-1. A BOARD ADJUSTMENTS



IF201 (RF AGC)
CV358 (APC.NTSC)
CV443 (APC.PAL)
RV001 (CH DISPLAY)
RV301 (DELAY)
RV302 (PHASE)
RV502 (V.LIN)
RV503 (V.SIZE)
RV551 (V.CENT)
RV801 (H.CENT)
RV802 (H.SIZE)
T301 (DAT)LINE CRAWL

3-3. FOCUS

Adjust FOCUS control for best picture.

3-4. SCREEN(G 2) and WHITE BALANCE [SCREEN(G2)]

1. Input a dots pattern.
2. Set the PIC,BRT controls at minimum and COLOR control at normal.
3. Confirm the BKG voltage is less than 165 Vdc when turning RV 701 (R.BKG), RV 703 (G.BKG) and RV 705 (B.BKG).
4. Note the color when becomes visible first when turning RV708 (SCRN).

[WHITE BALANCE(Cut off)]

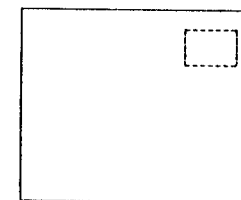
1. Input a collar-bar signal.
2. Set the PIC control to minimum and set the BRT control at normal.
3. Turn RV 704 (B.DRIVE) and RV 702 (G.DRIVE) fully clockwise.
4. Set RV701 (R.BKG), RV703 (G.BKG) and RV705 (B.BKG) to minimum.
5. Turn RV 709 (SUB BRT) slowly to obtain a faintly visible blue stripe.
6. Switch over all white signal.
7. Adjust BKG controls for best white balance.
8. Set the PICTURE control to maximum. Observe the screen and adjust the DRIVE controls for best white balance.
9. Repeat steps 7 and 8.

RF AGC ADJUSTMENT (IF201)

1. Receive a strong off-air signals.
2. Adjust RF AGC VR control so that snow noise and cross-modulation just disappear from the picture.

CHANNEL DISPLAY POSITION ADJUSTMENT (RV001)

1. Set PIC control to maximum.
2. Adjust RV001 so that the channel display should be positioned at up-right on the screen.



A • P • C ADJUSTMENT (CV443)..... (PAL)

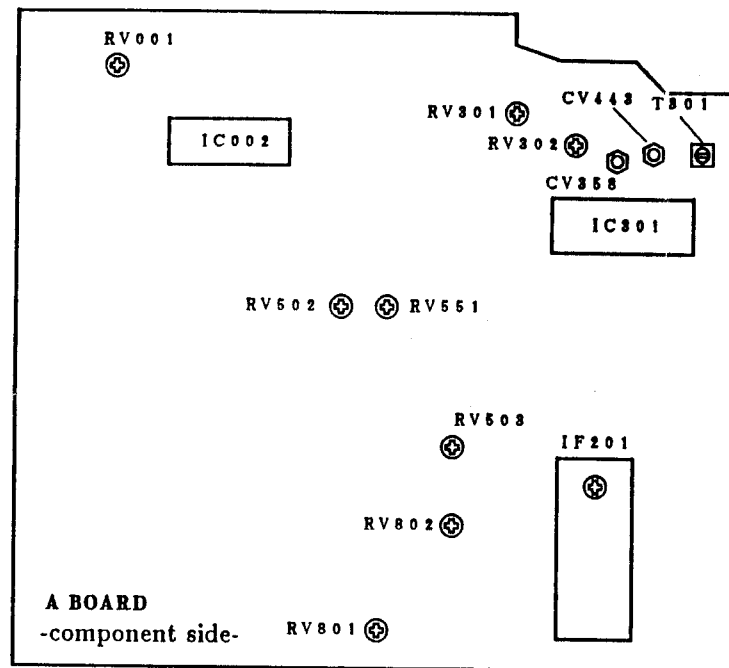
1. Short circuit between pin ④ and pin ⑦ of IC301 with jumper.
2. Input the PAL color-bar signal.
3. Set the PIC, COL, and BRT controls to normal.
4. Adjust CV443 for suitable color intensity.
5. Remove a jumper.

A • P • C ADJUSTMENT (CV358)..... (NTSC)

1. Short circuit between pin ④ and pin ⑦ of IC301 with a jumper.
2. Input NTSC 3.58 color-bar signal.
3. Set the PIC,COL and BRT controls to normal.
4. Adjust CV358 for suitable color intensity.
5. Remove the jumper.

SECTION 4 CIRCUIT ADJUSTMENTS

4-1. A BOARD ADJUSTMENTS



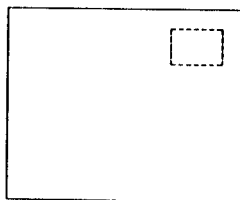
IF201 (RF AGC)
CV358 (APC.NTSC)
CV443 (APC.PAL)
RV001 (CH DISPLAY)
RV301 (DELAY)
RV302 (PHASE)
RV502 (V.LIN)
RV503 (V.SIZE)
RV551 (V.CENT)
RV801 (H.CENT)
RV802 (H.SIZE)
T301 (DAT)LINE CRAWL

RF AGC ADJUSTMENT (IF201)

1. Receive a strong off-air signals.
2. Adjust RF AGC VR control so that snow noise and cross-modulation just disappear from the picture.

CHANNEL DISPLAY POSITION ADJUSTMENT (RV001)

1. Set PIC control to maximum.
2. Adjust RV001 so that the channel display should be positioned at up-right on the screen.



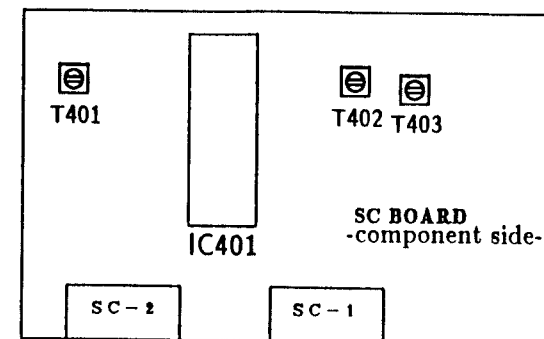
A • P • C ADJUSTMENT (CV443)..... (PAL)

1. Short circuit between pin ④ and pin ⑦ of IC301 with jumper.
2. Input the PAL color-bar signal.
3. Set the PIC, COL, and BRT controls to normal.
4. Adjust CV443 for suitable color intensity.
5. Remove a jumper.

A • P • C ADJUSTMENT (CV358)..... (NTSC)

1. Short circuit between pin ④ and pin ⑦ of IC301 with a jumper.
2. Input NTSC 3.58 color-bar signal.
3. Set the PIC, COL and BRT controls to normal.
4. Adjust CV358 for suitable color intensity.
5. Remove the jumper.

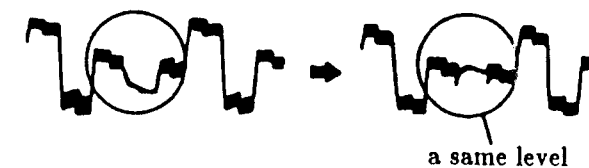
4-2.SC BOARD ADJUSTMENTS



T401 (DISCRI)
T402 (DISCRI)
T403 (BELL FILTER)

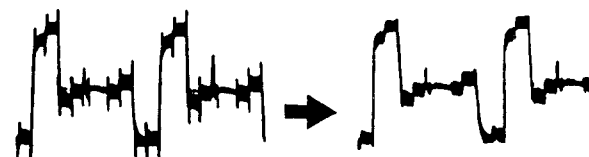
DISCRI ADJUSTMENT (T401,T402)

1. Input the SECAM color-bar signal.
2. Connect the dual-trace oscilloscope to the pin ④ (B-Y) and pin ③ (R-Y) of SC-1 connector.
3. Adjust T402 (R-Y) and T401 (B-Y) as shown the following figure.



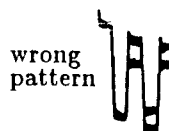
BELL FILTER ADJUSTMENT (T403)

1. Input the SECAM color-bar signal.
2. Connect the oscilloscope to pin ③ (R-Y) of SC-1 connector.
3. Adjust T403 as shown the following figure.



ANTI PAL, LINE CRAWL (RV301,RV302,T301)

- ANTI PAL AD.
1. Input the PAL
 2. Set the PIC, CO
 3. Connect the osc
 4. Adjust RV301 (
- connector.
obtain the wav

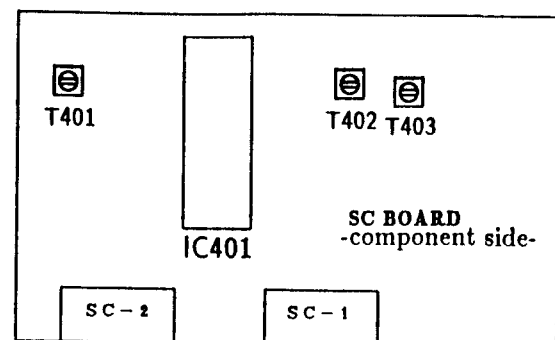


• LINE CRAWL

1. Input the PAL
 2. Set the PIC, CO
 3. Connect the osc
 4. Adjust T301 for
- connector.



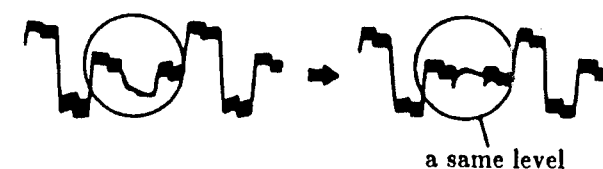
4-2.SC BOARD ADJUSTMENTS



T401 (DISCRI)
T402 (DISCRI)
T403 (BELL FILTER)

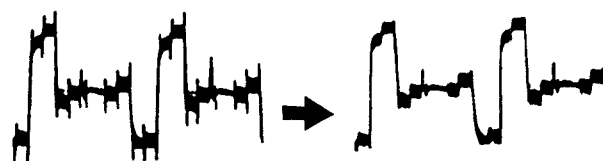
DISCRI ADJUSTMENT (T401, T402)

1. Input the SECAM color-bar signal.
2. Connect the dual-trace oscilloscope to the pin ④ (B-Y) and pin ③ (R-Y) of SC-1 connector.
3. Adjust T402 (R-Y) and T401 (B-Y) as shown the following figure.



BELL FILTER ADJUSTMENT (T403)

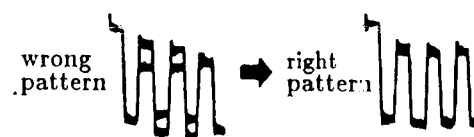
1. Input the SECAM color-bar signal.
2. Connect the oscilloscope to pin ③ (R-Y) of SC-1 connector.
3. Adjust T403 as shown the following figure.



ANTI PAL, LINE CRAWLING ADJUSTMENT (RV301, RV302, T301)

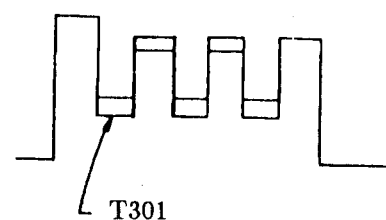
• ANTI PAL ADJUSTMENT

1. Input the PAL color-bar signal.
2. Set the PIC, COL and BRT controls to normal.
3. Connect the oscilloscope to pin ③ of A-1 connector.
4. Adjust RV301 (DELAY) and RV302 (PHASE) to obtain the waveform as shown below.



• LINE CRAWLING ADJUSTMENT

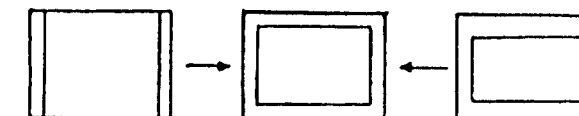
1. Input the PAL color-bar signal.
2. Set the PIC, COL and BRT controls to normal.
3. Connect the oscilloscope to pin ③ of A-1 connector.
4. Adjust T301 for minimum line crawling.



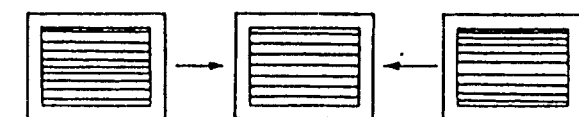
RV802 H.SIZE (HORIZONTAL SIZE)



RV503 V.SIZE (VERTICAL SIZE)



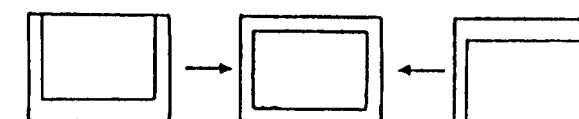
RV502 V.LIN (VERTICAL LINEARITY)



RV801 H.CENT (HORIZONTAL CENTER)

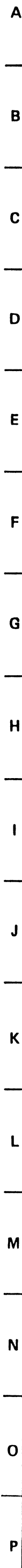


RV551 V.CENT (VERTICAL CENTER)

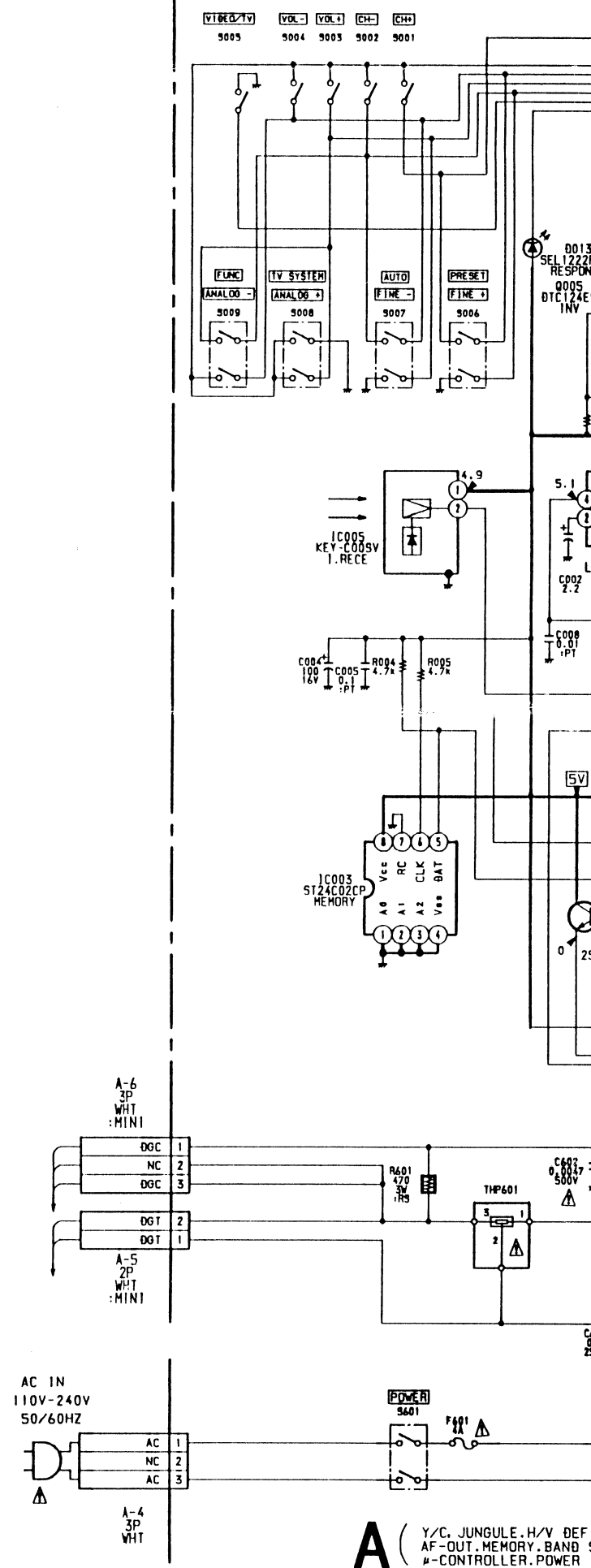


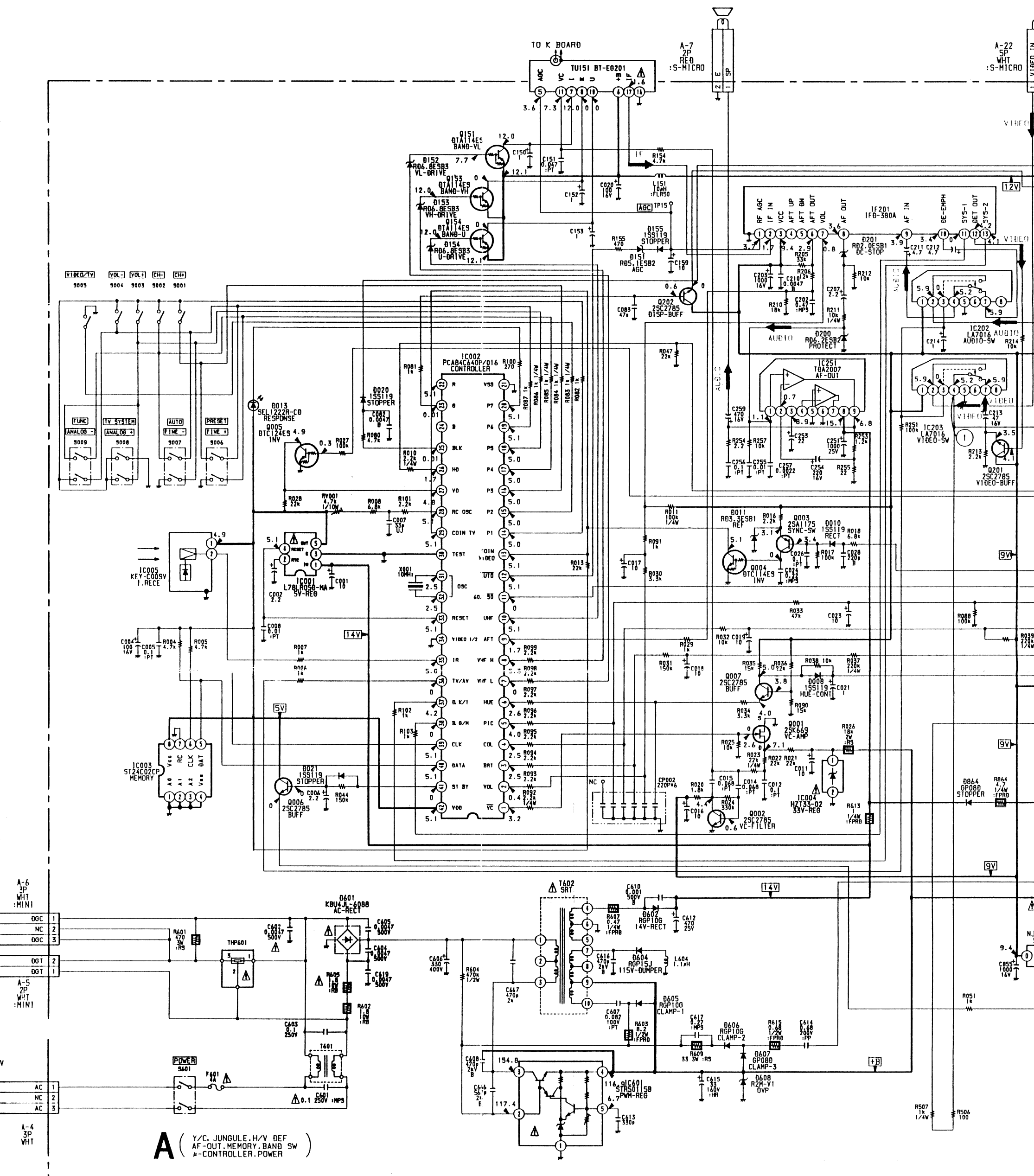
5-2. SCHEMATIC DIAGRAM (1)

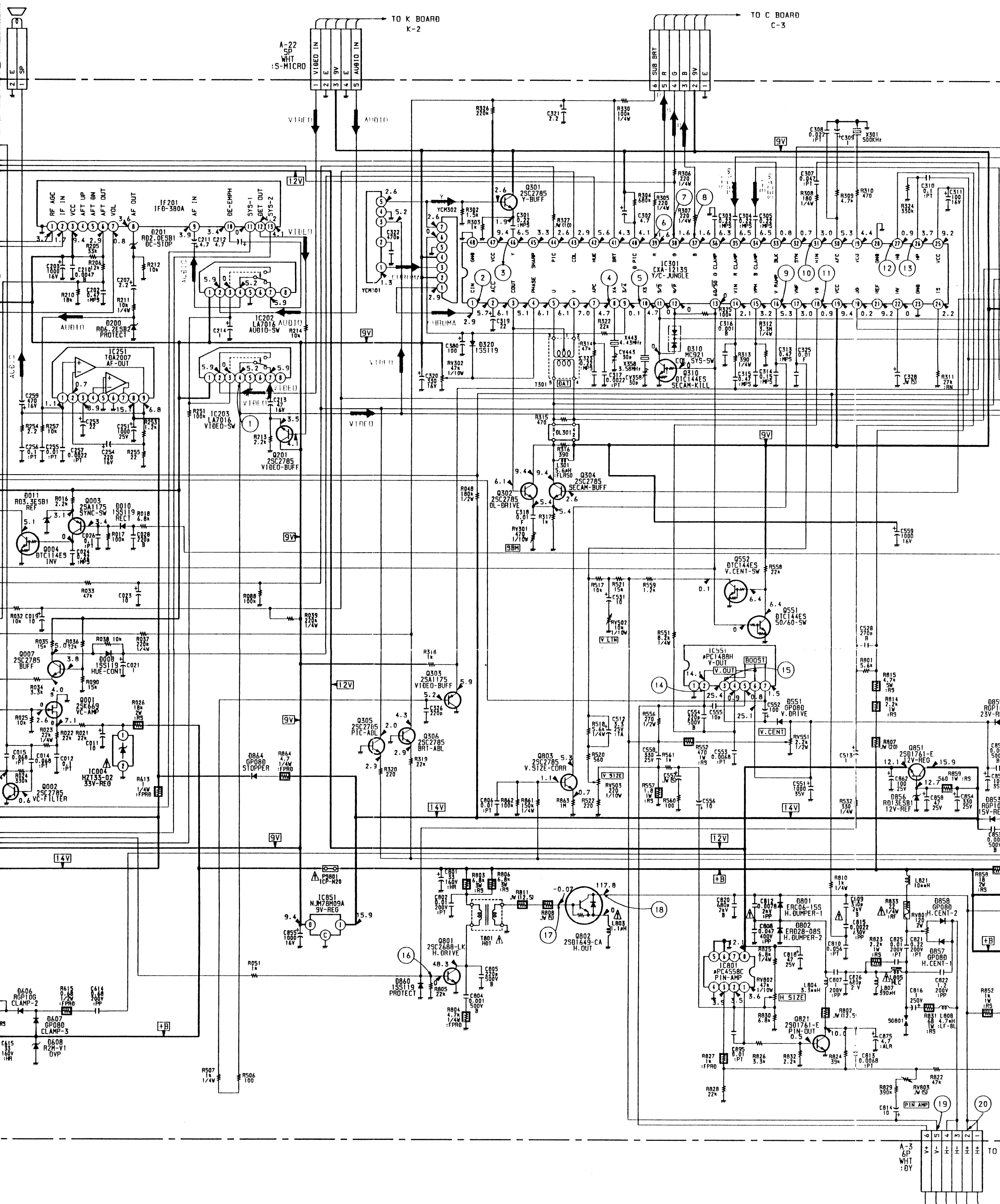
1 | 2 | 3 | 4

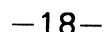


15







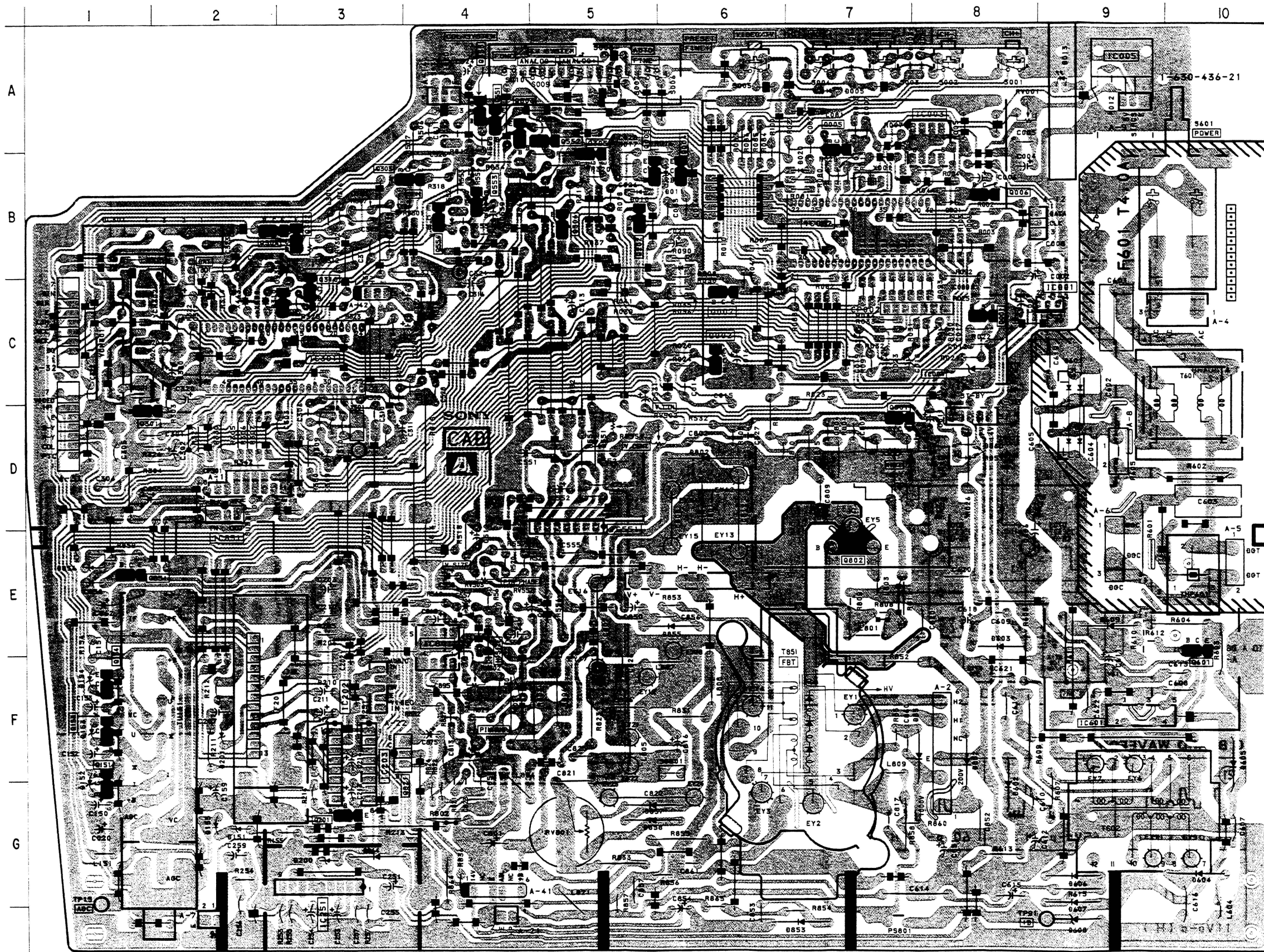


5-3. PRINTED WIRING BOARD (1)
-CONDUCTOR SIDE-

Y/C, JUNGLE, H/V DEF
AF-OUT, MEMORY, BAND SW
μ - CONTROLLER, POWER

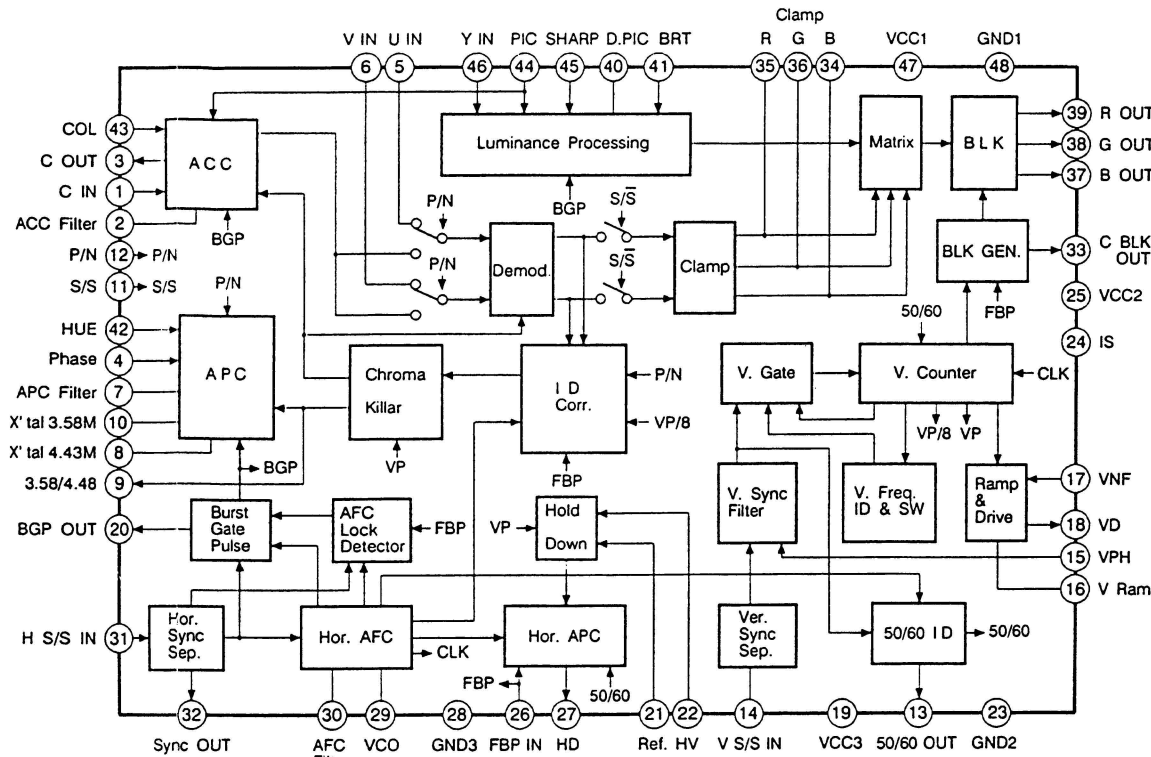
A

A



IC		DIODE		DELAY LINE
IC001	C-9	D008	B-6	DL301 B-1
IC002	B-7	D010	B-5	
IC003	A-8	D011	B-6	
IC004	C-8	D013	A-9	
IC005	A-9	D020	B-7	
IC202	F-3	D021	B-8	
IC203	F-3	D151	F-2	
IC251	G-3	D152	F-1	
IC301	C-3	D153	F-1	
IC551	D-5	D154	F-1	
IC601	F-9	D155	F-2	
IC801	E-4	D200	G-3	
IC851	D-2	D201	F-2	
TRANSISTOR		D310	C-3	
		D320	C-2	
		D551	D-5	
		D601	C-9	
		D602	G-8	
		D604	G-10	
		D605	F-10	
		D606	G-9	
		D607	G-9	
		D608	G-9	
		D801	D-6	
		D802	D-6	
		D851	F-8	
		D852	F-8	
		D853	G-7	
		D855	E-6	
		D856	E-1	
		D857	G-5	
		D858	G-5	
		D860	D-8	
		D864	G-3	
VARIABLE RESISTOR				
		RV001	A-8	
		RV301	B-4	
		RV302	B-3	
		RV502	D-6	
		RV503	E-4	
		RV551	D-5	
		RV801	G-5	
		RV802	F-4	

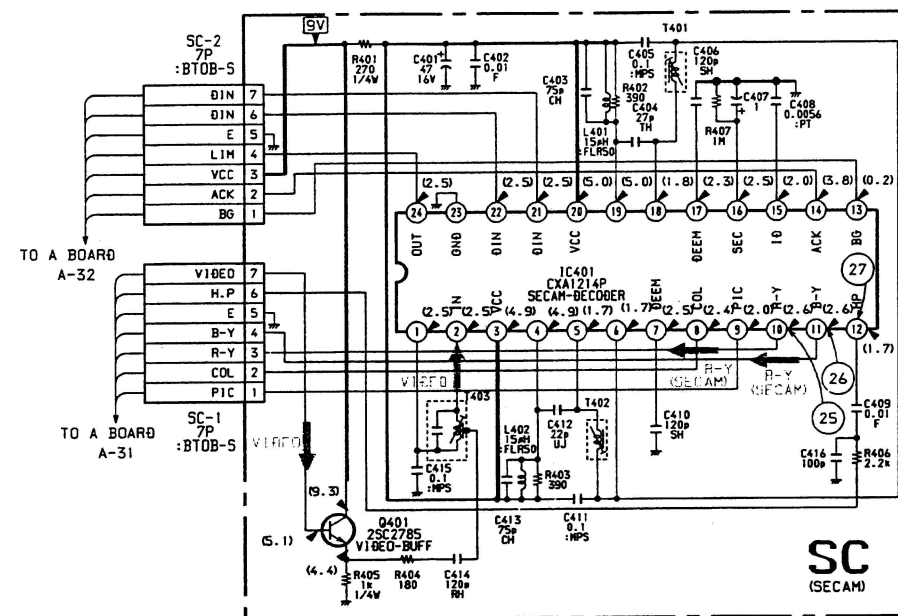
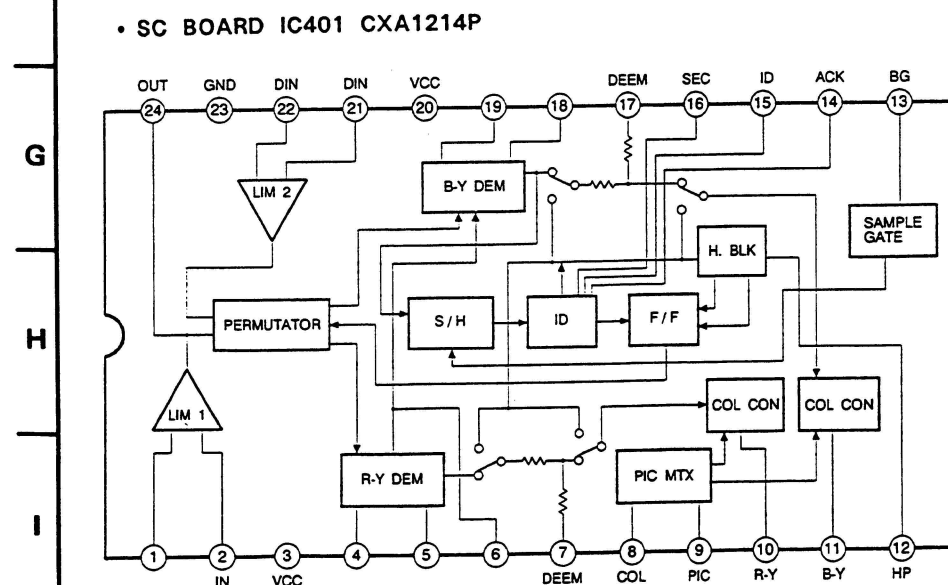
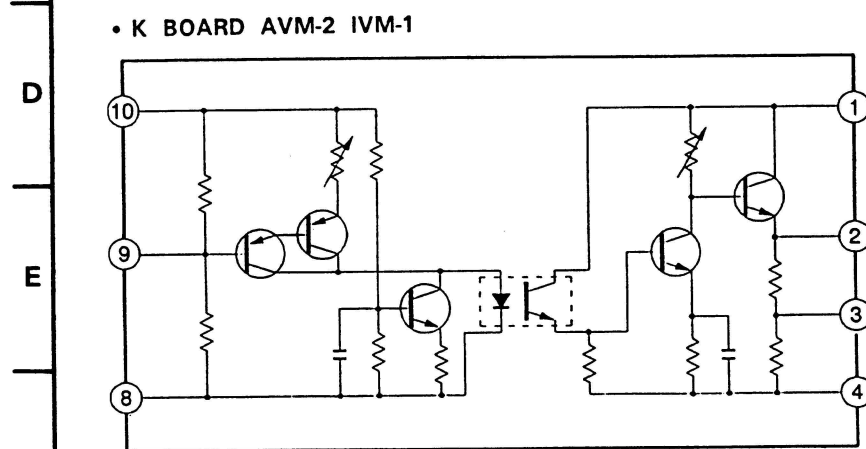
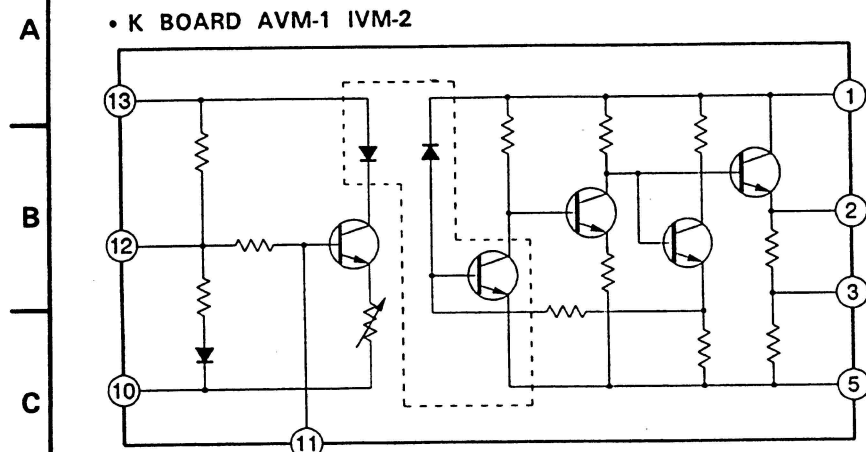
• A BOARD IC301 CXA1213S



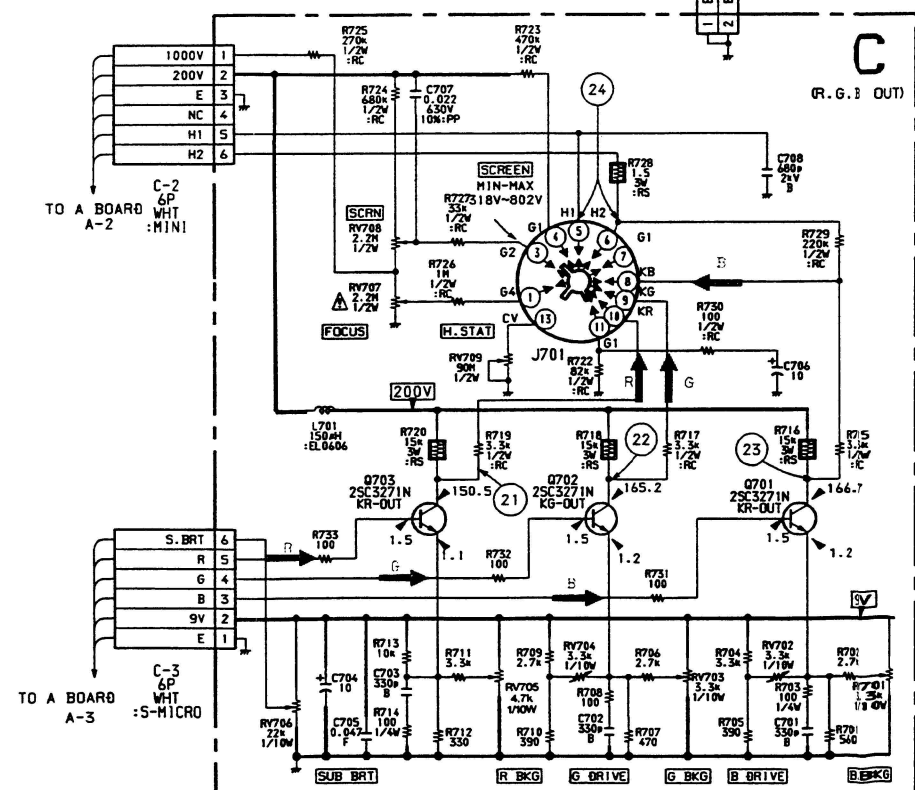
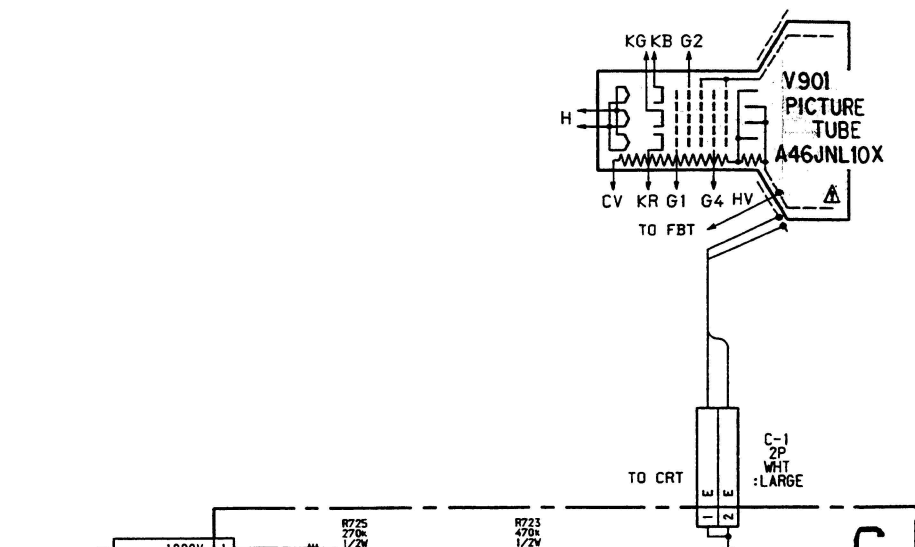
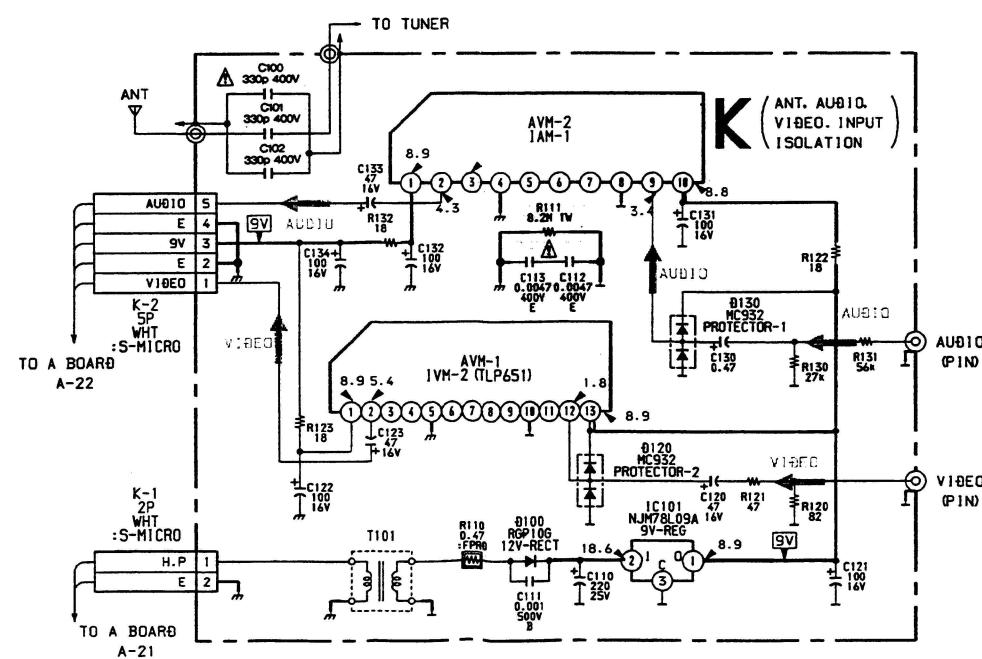
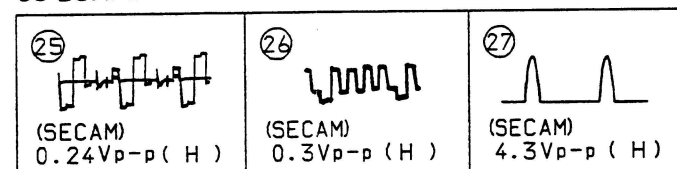
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

SCHEMATIC DIAGRAM (2)

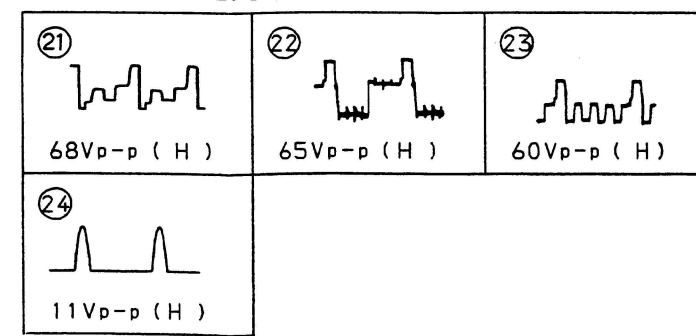
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



SC BOARD WAVEFORM



C BOARD WAVEFORM

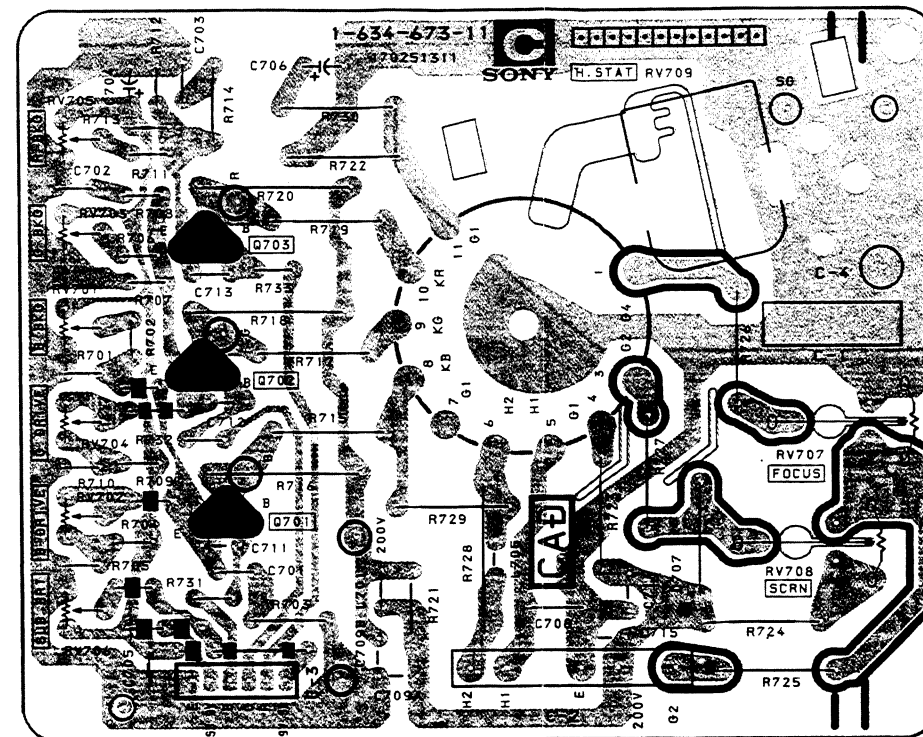


PRINTED WIRING BOARD (2)

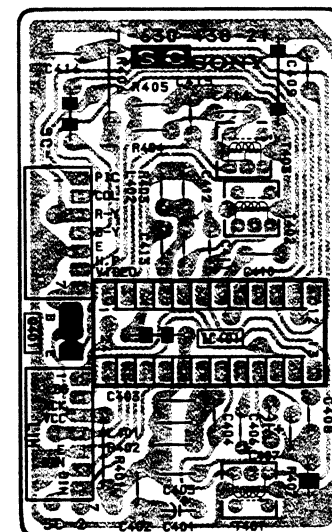
—CONDUCTOR SIDE—

C [R·G·B OUT] **SC** [SECAM] **K** [ANT, AUDIO VIDEO INPUT]

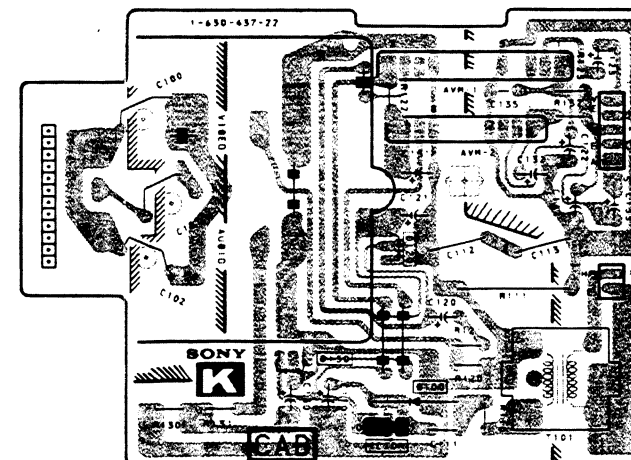
—C BOARD—



—SC BOARD—

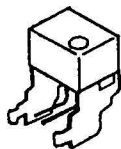


—K BOARD—



5-4. SEMICONDUCTORS

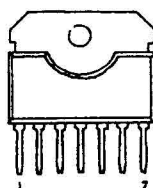
BX-1398
KEY-C00SV



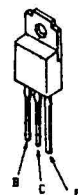
PCA84C640P/016



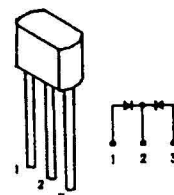
μPC1448H



2SD1761-E



MC921



L78LR05D-MA



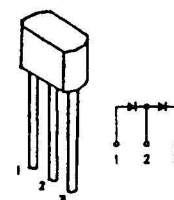
DTA114ES
DTC114ES
DTC124ES
DTC144ES



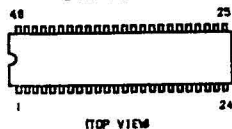
2SK669



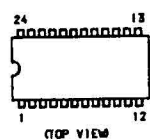
MC931



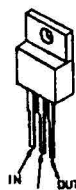
CXA1213S



CXA1214P



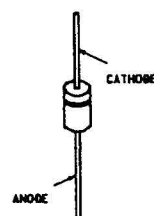
RC78M09FA



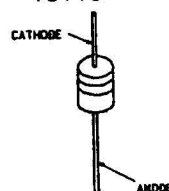
2SA1175-HFE
2SC2785-HFE



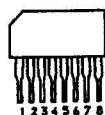
ERC06-15S
RU-3AM
R2M
H2T33-02TA



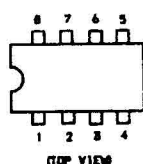
RD2.0ES-B1
RD5.1ES-B2
RD6.2ES-B2
RD6.8ES-B1
RD13ES-B1
1S119



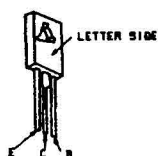
LA7016



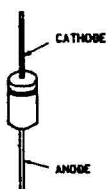
ST24C02CP
μPC4558C



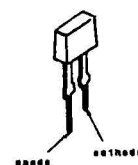
2SC2688-LK
2SC3271-N



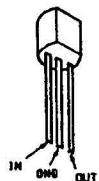
ES1F
GP08DPKG23
GPR10G
RGP15J
U05G



SEL1222R-C. Ø



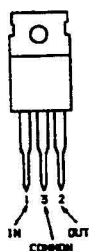
NJM78L09A



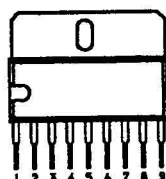
STR50115B



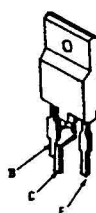
NJM78M09A



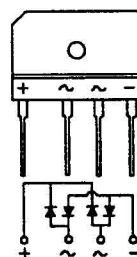
TDA2007



2SD1649-CA



KBU4JL-6088



SECTION 6

EXPLODED VIEW

NOTE:

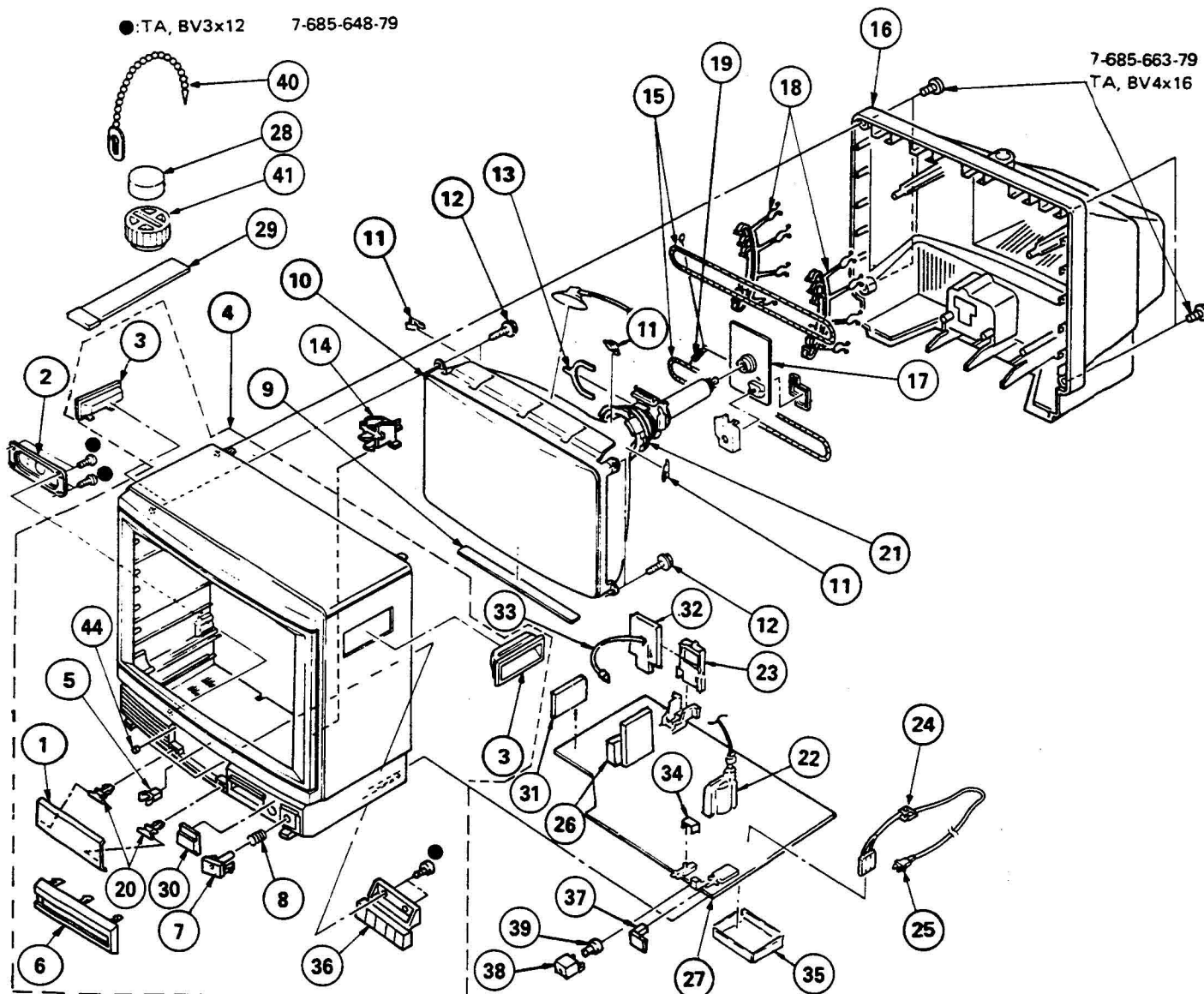
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

●:TA, BV3x12 7-685-648-79

7-685-663-79
TA, BV4x16



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4380-066-1	DOOR ASSY, CONTROL		24	Δ 4-389-778-01	HOLDER, AC CORD	
2	1-544-190-11	SPEAKER		25	Δ 1-574-062-22	CORD, POWER (WITH CONNECTOR)	
3	4-313-702-91	HANDLE		26	Δ 1-465-216-11	TUNER, ET (BT-EG201)	
4	X-4380-067-1	BEZEL ASSY	1,3,5-8,20,30,36,44	27	*A-1296-736-A	A BOARD, COMPLETE	31
5	4-386-710-01	CATCHER, PUSH		28	1-452-032-00	MAGNET, DISK; 10MM ϕ	
6	4-397-459-01	PANEL, CONTROL		29	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
7	4-397-456-01	BUTTON, POWER		30	4-397-455-01	WINDOW, ORNAMENTAL	
8	4-329-112-00	SPRING, COMPRESSION		31	*1-630-438-11	SC BOARD	
9	4-372-556-11	SHEET, BLOTTER		32	*1-630-437-11	K BOARD	
10	Δ 8-737-951-05	PICTURE TUBE (A46JNL10X)		33	*1-575-691-11	CABLE, PIN	
11	3-703-961-01	SPACER, DY		34	*4-387-054-01	COVER, LED HOLDER	
12	4-307-249-00	SCREW (5), TAPPING		35	*4-394-974-01	CASE (BOTTOM LID), SHIELD	
13	1-452-277-00	MAGNET, BMC		36	4-397-458-01	BUTTON, MULTI	
14	*4-397-451-01	HOLDER, PC BOARD		37	4-394-972-01	CAP, POWER	
15	Δ 1-426-307-11	COIL, DEMAGNETIZATION		38	*4-387-889-01	BRACKET (B), LIGHT GUIDE	
16	4-397-460-01	COVER, REAR		39	*4-387-890-01	GUIDE, LIGHT	
17	*A-1330-984-A	C BOARD, COMPLETE		40	4-308-870-00	CLIP, LEAD WIRE	
18	*4-341-778-01	BAND, DEGAUSSING COIL		41	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
19	4-369-318-00	SPRING, TENSION		44	3-831-441-99	SPACER (B)	
20	3-662-365-00	SHAFT (S), DOOR					
21	Δ 1-451-279-21	DEFLECTION YOKE (Y19PXA)					
22	Δ 1-439-424-11	TRANSFORMER ASSY, FLYBACK (NX-1700L)					
23	Δ 1-417-149-11	MIXER, U/V					

SECTION 7 ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark Δ are critical for safety.

Replace only with part number specified.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

• All resistors are in ohms
• F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

• MF : μ F, PF : μ F

COILS

• MMH : mH, UH : μ H

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1296-736-A	A BOARD, COMPLETE	*****		C213	1-124-477-11	ELECT 47MF 20% 16V	
*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			C214	1-124-791-11	ELECT 1MF 20% 50V	
*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P			C251	1-124-557-11	ELECT 1000MF 20% 25V	
*1-564-505-11	PLUG, CONNECTOR 2P			C253	1-126-233-11	ELECT 22MF 20% 50V	
*1-564-508-11	PLUG, CONNECTOR 5P			C254	1-124-120-11	ELECT 220MF 20% 16V	
*1-564-509-11	PLUG, CONNECTOR 6P			C255	1-130-483-00	MYLAR 0.01MF 5% 50V	
*1-565-395-11	PIN, CONNECTOR 3P			C256	1-130-495-00	MYLAR 0.1MF 5% 50V	
*1-565-498-11	CONNECTOR, BOARD TO BOARD 7P			C257	1-130-475-00	MYLAR 0.0022MF 5% 50V	
*1-568-536-11	PLUG (MINIATURE DY) 6P			C259	1-126-103-11	ELECT 470MF 20% 16V	
*4-341-751-01	EYELET (EY6, EY7, EY9, EY11, EY12, EY13, EY14, EY15, EY16, EY17, EY18, EY19, EY21, EY22, EY23, EY24)			C266	1-124-791-11	ELECT 1MF 20% 50V	
*4-341-752-01	EYELET (EY1, EY2, EY3, EY4, EY5)			C301	1-136-169-00	FILM 0.22MF 5% 50V	
<CAPACITOR>				C302	1-124-927-11	ELECT 4.7MF 20% 50V	
C001	1-123-875-11	ELECT 10MF 20% 50V		C303	1-136-169-00	FILM 0.22MF 5% 50V	
C002	1-124-925-11	ELECT 2.2MF 20% 50V		C304	1-136-169-00	FILM 0.22MF 5% 50V	
C004	1-126-101-11	ELECT 100MF 20% 16V		C305	1-136-169-00	FILM 0.22MF 5% 50V	
C005	1-130-495-00	MYLAR 0.1MF 5% 50V		C307	1-130-491-00	MYLAR 0.047MF 5% 50V	
C006	1-124-925-11	ELECT 2.2MF 20% 50V		C308	1-130-487-00	MYLAR 0.022MF 5% 50V	
C007	1-102-963-00	CERAMIC 33PF 5% 50V		C309	1-124-791-11	ELECT 1MF 20% 50V	
C008	1-130-483-00	MYLAR 0.01MF 5% 50V		C310	1-130-495-00	MYLAR 0.1MF 5% 50V	
C011	1-123-875-11	ELECT 10MF 20% 50V		C311	1-126-101-11	ELECT 100MF 20% 16V	
C012	1-130-495-00	MYLAR 0.1MF 5% 50V		C313	1-136-173-00	FILM 0.47MF 5% 50V	
C014	1-130-493-00	MYLAR 0.068MF 5% 50V		C314	1-136-167-00	FILM 0.15MF 5% 50V	
C015	1-130-493-00	MYLAR 0.068MF 5% 50V		C315	1-136-173-00	FILM 0.47MF 5% 50V	
C016	1-123-875-11	ELECT 10MF 20% 50V		C316	1-102-074-00	CERAMIC 0.001MF 10% 50V	
C017	1-123-875-11	ELECT 10MF 20% 50V		C317	1-130-475-00	MYLAR 0.0022MF 5% 50V	
C018	1-123-875-11	ELECT 10MF 20% 50V		C318	1-106-367-00	MYLAR 0.01MF 10% 200V	
C019	1-123-875-11	ELECT 10MF 20% 50V		C319	1-126-233-11	ELECT 22MF 20% 50V	
C020	1-126-101-11	ELECT 100MF 20% 16V		C320	1-124-119-00	ELECT 330MF 20% 16V	
C021	1-124-791-11	ELECT 1MF 20% 50V		C321	1-124-925-11	ELECT 2.2MF 20% 50V	
C023	1-123-875-11	ELECT 10MF 20% 50V		C322	1-102-824-00	CERAMIC 470PF 5% 50V	
C024	1-136-169-00	FILM 0.22MF 5% 50V		C323	1-136-169-00	FILM 0.22MF 5% 50V	
C026	1-130-495-00	MYLAR 0.1MF 5% 50V		C325	1-101-004-00	CERAMIC 0.01MF 5% 50V	
C028	1-102-110-00	CERAMIC 220PF 10% 50V		C326	1-102-978-00	CERAMIC 220PF 5% 50V	
C082	1-102-125-00	CERAMIC 0.0047MF 10% 50V		C380	1-124-122-11	ELECT 100MF 20% 50V	
C083	1-101-880-00	CERAMIC 47PF 10% 50V		C512	1-131-350-00	TANTALUM 3.3MF 10% 25V	
C150	1-124-791-11	ELECT 1MF 20% 50V		C513	1-124-791-11	ELECT 1MF 20% 50V	
C151	1-130-491-00	MYLAR 0.047MF 5% 50V		C528	1-102-111-00	CERAMIC 270PF 10% 50V	
C152	1-124-791-11	ELECT 1MF 20% 50V		C531	1-123-875-11	ELECT 10MF 20% 50V	
C153	1-124-791-11	ELECT 1MF 20% 50V		C551	1-126-105-11	ELECT 1000MF 20% 35V	
C159	1-123-875-11	ELECT 10MF 20% 50V		C552	1-124-122-11	ELECT 100MF 20% 50V	
C202	1-136-173-00	FILM 0.47MF 5% 50V		C553	1-130-481-00	MYLAR 0.0068MF 5% 50V	
C203	1-124-360-00	ELECT 1000MF 20% 16V		C554	1-102-244-00	CERAMIC 220PF 10% 50V	
C207	1-124-925-11	ELECT 2.2MF 20% 50V		C555	1-102-947-00	CERAMIC 10PF 0.5PF 50V	
C210	1-102-125-00	CERAMIC 0.0047MF 10% 50V		C556	1-123-875-11	ELECT 10MF 20% 50V	
C211	1-124-927-11	ELECT 4.7MF 20% 50V		C558	1-124-479-11	ELECT 330MF 20% 25V	
C212	1-124-927-11	ELECT 4.7MF 20% 50V		C559	1-124-360-00	ELECT 1000MF 20% 16V	
C601	Δ 1-136-548-13	FILM 0.1MF 20% 250V		C602	Δ 1-161-830-51	CERAMIC 0.0047MF 10% 50V	
C603	Δ 1-136-548-13	FILM 0.1MF 20% 250V		C603	Δ 1-136-548-13	FILM 0.1MF 20% 250V	
C604	Δ 1-161-830-51	CERAMIC 0.0047MF 10% 50V		C604	Δ 1-161-830-51	CERAMIC 0.0047MF 10% 50V	
C605	Δ 1-161-830-51	CERAMIC 0.0047MF 10% 50V		C605	Δ 1-161-830-51	CERAMIC 0.0047MF 10% 50V	

A


The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C606	1-125-555-11	ELECT	330MF 20% 400V	D011	8-719-109-66	DIODE RD3.3ES-B2	
C607	1-106-218-00	MYLAR	0.082MF 10% 100V	D013	8-719-311-89	DIODE SEL1222R-C	
C608	1-162-134-11	CERAMIC	470PF 10% 2KV		*4-387-028-01	HOLDER, LED; D013	
C610	1-162-318-11	CERAMIC	0.001MF 10% 500V	D020	8-719-911-19	DIODE 1SS119	
C612	1-124-480-11	ELECT	470MF 20% 25V	D021	8-719-911-19	DIODE 1SS119	
C613	1-102-820-00	CERAMIC	330PF 5% 50V	D151	8-719-109-85	DIODE RD5.1ES-B2	
C614	1-136-109-00	FILM	0.68MF 5% 200V	D152	8-719-109-98	DIODE RD6.8ES-B3	
C615	1-123-024-21	ELECT	33MF 10% 160V	D153	8-719-109-98	DIODE RD6.8ES-B3	
C616	1-162-134-11	CERAMIC	470PF 10% 2KV	D154	8-719-109-98	DIODE RD6.8ES-B3	
C617	1-136-170-00	FILM	0.27MF 5% 50V	D155	8-719-911-19	DIODE 1SS119	
C619 Δ	1-161-830-51	CERAMIC	0.0047MF 500V	D200	8-719-109-93	DIODE RD6.2ES-B2	
C666	1-162-135-11	CERAMIC	560PF 10% 2KV	D201	8-719-109-50	DIODE RD2.0ES-B1	
C667	1-162-134-11	CERAMIC	470PF 10% 2KV	D310	8-719-000-06	DIODE MC921	
C801	1-123-024-21	ELECT	33MF 160V	D320	8-719-911-19	DIODE 1SS119	
C802	1-106-367-00	MYLAR	0.01MF 10% 200V	D551	8-719-911-55	DIODE U05G	
C804	1-162-318-11	CERAMIC	0.001MF 10% 500V	D601 Δ	8-719-946-90	DIODE RU-3AM	
C805	1-102-244-00	CERAMIC	220PF 10% 500V	D602	8-719-300-33	DIODE RU-3AM	
C806	1-130-483-00	MYLAR	0.01MF 5% 50V	D604	8-719-979-85	DIODE EGP20G	
C807	1-136-111-00	FILM	1MF 5% 200V	D605	8-719-300-33	DIODE RU-3AM	
C808 Δ	1-136-313-51	CERAMIC	0.0047MF 5% 400V	D606	8-719-300-33	DIODE RU-3AM	
C809 Δ	1-162-115-51	CERAMIC	560PF 10% 2KV	D607	8-719-911-55	DIODE U05G	
C810	1-130-492-11	MYLAR	0.056MF 5% 50V	D608	8-719-303-49	DIODE R2M	
C812 Δ	1-136-545-11	CERAMIC	0.0047MF 5% 2KV	D801	8-719-945-80	DIODE ERC06-15S	
C813	1-130-481-00	MYLAR	0.0068MF 5% 50V	D802	8-719-928-08	DIODE ERD28-08S	
C814	1-123-875-11	ELECT	10MF 20% 50V	D851	8-719-300-33	DIODE RU-3AM	
C815 Δ	1-129-898-51	FILM	0.0022MF 5% 630V	D852	8-719-300-65	DIODE ES1F	
C816	1-124-634-11	ELECT	1MF 20% 250V	D853	8-719-300-33	DIODE RU-3AM	
C817	1-106-375-12	MYLAR	0.022MF 10% 100V	D855	8-719-300-33	DIODE RU-3AM	
C818	1-124-477-11	ELECT	47MF 20% 25V	D856	8-719-110-35	DIODE RD13ES-B1	
C820	1-162-116-00	CERAMIC	680PF 10% 2KV	D857	8-719-911-55	DIODE U05G	
C821	1-106-399-00	MYLAR	0.22MF 10% 200V	D858	8-719-911-55	DIODE U05G	
C822	1-136-569-11	FILM	1.2MF 5% 200V	D860	8-719-911-19	DIODE 1SS119	
C825	1-106-367-00	MYLAR	0.01MF 10% 200V	D864	8-719-911-55	DIODE U05G	
C826	1-162-116-00	CERAMIC	680PF 10% 2KV				
C850	1-124-122-11	ELECT	100MF 20% 35V				
C851	1-123-948-00	ELECT	22MF 20% 250V				
C852	1-162-114-00	CERAMIC	0.0047MF 2KV				
C853	1-162-318-11	CERAMIC	0.001MF 10% 500V				
C854	1-124-479-11	ELECT	330MF 20% 25V				
C855	1-124-360-00	ELECT	1000MF 20% 16V				
C856	1-162-318-11	CERAMIC	0.001MF 10% 500V				
C857	1-106-383-00	MYLAR	0.047MF 10% 100V				
C858	1-124-477-11	ELECT	47MF 20% 25V				
C859	1-130-473-00	MYLAR	0.0015MF 5% 50V				
C860	1-102-228-00	CERAMIC	470PF 10% 500V				
C861	1-106-347-00	MYLAR	0.0015MF 10% 100V				
C862	1-124-478-11	ELECT	100MF 20% 25V				
C875	1-124-045-00	ELECT	4.7MF 20% 50V				
C895	1-130-483-00	MYLAR	0.01MF 5% 50V				
<COMPOSITION CIRCUIT BLOCK>							
CP002	1-233-153-11	COMPOSITION CIRCUIT BLOCK					
CP301	1-236-525-11	NETWORK, C					
<TRIMMER>							
CV358	1-141-245-00	TRIMMER, CERAMIC					
CV443	1-141-245-00	TRIMMER, CERAMIC					
<DIODE>							
D008	8-719-911-19	DIODE 1SS119					
D010	8-719-911-19	DIODE 1SS119					
<DELAY LINE>							
DL301	1-415-122-31	DELAY LINE, 1H (PAL)					
<FUSE>							
F601A Δ	1-532-350-11	FUSE, TIME-LAG 1A/250V					
	*1-533-189-11	HOLDER, FUSE; F601					
<IC>							
IC001A Δ	8-759-805-37	IC LA78LR05D-MA					
IC002	8-759-984-26	IC PCA84C640P-016					
IC003	8-759-988-32	IC ST24C02CP					
IC004A Δ	8-759-300-42	IC NZT33-02					
IC005	8-749-920-65	IC KEY-C00SV					
IC202	8-759-800-81	IC LA7016					
IC203	8-759-800-81	IC LA7016					
IC251	8-759-985-06	IC TDA2007					
IC301	8-752-036-21	IC CXA1213S					
IC551	8-759-113-05	IC UPC1488H					
IC601 Δ	8-749-901-40	IC STR50115B					
	4-377-115-01	SPACER (A), MTCA; IC601					
	4-394-984-01	SPRING; IC601					
IC801	8-759-945-58	IC RC4558P					
IC851	8-759-982-34	IC RC78M09FA					
<IF BLOCK>							
IF201	1-466-138-11	IF BLOCK (IFD-380A)					

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<COIL>				R023	1-249-462-11	CARBON 22K 5% 1/4W	
L151	1-410-470-11	INDUCTOR 10UH		R024	1-247-891-00	CARBON 330K 5% 1/4W	
L301	1-408-406-00	INDUCTOR 5.6UH		R025	1-249-429-11	CARBON 10K 5% 1/4W	
L604	1-410-397-21	FERRITE BEAD INDUCTOR		R026	1-216-464-11	METAL OXIDE 18K 5% 2W	F
L803A	1-410-397-31	FERRITE BEAD INDUCTOR		R027	1-249-441-11	CARBON 100K 5% 1/4W	
L804	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE		R028	1-249-433-11	CARBON 22K 5% 1/4W	
L805A	1-459-760-23	COIL, HORIZONTAL LINEARITY	7288	R029	1-249-417-11	CARBON 1K 5% 1/4W	
L807	1-459-390-00	COIL (WITH CORE)		R030	1-249-423-11	CARBON 3.3K 5% 1/4W	
L808	1-408-239-00	INDUCTOR 4.7MMH		R031	1-247-883-00	CARBON 150K 5% 1/4W	
L809	1-459-407-00	COIL, FERRITE CHOKE		R032	1-249-429-11	CARBON 10K 5% 1/4W	
L821	1-459-104-00	COIL, DUST CORE		R033	1-249-437-11	CARBON 47K 5% 1/4W	
<IC LINK>				R034	1-249-423-11	CARBON 3.3K 5% 1/4W	
PS801A	1-532-679-91	LINK, IC (ICP-N15) 0.6A		R035	1-249-431-11	CARBON 15K 5% 1/4W	
<TRANSISTOR>				R036	1-249-433-11	CARBON 22K 5% 1/4W	
Q001	8-729-808-36	TRANSISTOR 2SK669		R037	1-247-887-00	CARBON 220K 5% 1/4W	
Q002	8-729-119-78	TRANSISTOR 2SC2785-HFE		R038	1-249-429-11	CARBON 10K 5% 1/4W	
Q003	8-729-119-76	TRANSISTOR 2SA1175-HFE		R039	1-247-887-00	CARBON 220K 5% 1/4W	
Q004	8-729-900-80	TRANSISTOR DTC114ES		R044	1-247-883-00	CARBON 150K 5% 1/4W	
Q005	8-729-900-36	TRANSISTOR DTC124ES		R047	1-249-433-11	CARBON 22K 5% 1/4W	
Q006	8-729-119-78	TRANSISTOR 2SC2785-HFE		R048	1-214-919-00	CARBON 180K 5% 1/2W	
Q007	8-729-119-78	TRANSISTOR 2SC2785-HFE		R051	1-249-417-11	CARBON 1K 5% 1/4W	
Q151	8-729-900-61	TRANSISTOR DTA114ES		R080	1-249-425-11	CARBON 4.7K 5% 1/4W	
Q153	8-729-900-61	TRANSISTOR DTA114ES		R081	1-249-417-11	CARBON 1K 5% 1/4W	
Q154	8-729-900-61	TRANSISTOR DTA114ES		R082	1-249-417-11	CARBON 1K 5% 1/4W	
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE		R083	1-247-713-11	CARBON 1K 5% 1/4W	
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE		R084	1-247-713-11	CARBON 1K 5% 1/4W	
Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE		R085	1-247-713-11	CARBON 1K 5% 1/4W	
Q302	8-729-119-78	TRANSISTOR 2SC2785-HFE		R086	1-247-713-11	CARBON 1K 5% 1/4W	
Q303	8-729-119-76	TRANSISTOR 2SA1175-HFE		R087	1-249-417-11	CARBON 1K 5% 1/4W	
Q304	8-729-119-78	TRANSISTOR 2SC2785-HFE		R088	1-249-441-11	CARBON 100K 5% 1/4W	
Q305	8-729-119-78	TRANSISTOR 2SC2785-HFE		R090	1-249-431-11	CARBON 15K 5% 1/4W	
Q306	8-729-119-78	TRANSISTOR 2SC2785-HFE		R091	1-249-417-11	CARBON 1K 5% 1/4W	
Q310	8-729-900-89	TRANSISTOR DTC144ES		R092	1-247-717-11	CARBON 2.2K 5% 1/4W	
Q551	8-729-900-89	TRANSISTOR DTC144ES		R093	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q552	8-729-900-89	TRANSISTOR DTC144ES		R094	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q801	8-729-119-80	TRANSISTOR 2SC2688-LK		R095	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q802	8-729-802-50	TRANSISTOR 2SD1649-CA		R096	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q803	4-394-984-01	SPRING; Q802		R097	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q821	8-729-107-26	TRANSISTOR 2SD1585-K		R098	1-249-421-11	CARBON 2.2K 5% 1/4W	
Q851	8-729-107-26	TRANSISTOR 2SD1585-K		R099	1-249-421-11	CARBON 2.2K 5% 1/4W	
<RESISTOR>				R100	1-249-410-11	CARBON 270 5% 1/4W	
R004	1-249-425-11	CARBON 4.7K 5% 1/4W		R101	1-249-421-11	CARBON 2.2K 5% 1/4W	
R005	1-249-425-11	CARBON 4.7K 5% 1/4W		R102	1-249-417-11	CARBON 1K 5% 1/4W	
R006	1-249-417-11	CARBON 1K 5% 1/4W		R103	1-249-417-11	CARBON 1K 5% 1/4W	
R007	1-249-417-11	CARBON 1K 5% 1/4W		R154	1-249-425-11	CARBON 4.7K 5% 1/4W	
R008	1-249-427-11	CARBON 6.8K 5% 1/4W		R155	1-249-413-11	CARBON 470 5% 1/4W	
R010	1-247-717-11	CARBON 2.2K 5% 1/4W		R205	1-249-435-11	CARBON 33K 5% 1/4W	
R011	1-249-469-11	CARBON 100K 5% 1/4W		R206	1-249-430-11	CARBON 12K 5% 1/4W	
R013	1-249-433-11	CARBON 22K 5% 1/4W		R210	1-249-432-11	CARBON 18K 5% 1/4W	
R016	1-249-421-11	CARBON 2.2K 5% 1/4W		R211	1-247-725-11	CARBON 10K 5% 1/4W	
R017	1-249-441-11	CARBON 100K 5% 1/4W		R212	1-249-429-11	CARBON 10K 5% 1/4W	
R018	1-249-427-11	CARBON 6.8K 5% 1/4W		R213	1-249-421-11	CARBON 2.2K 5% 1/4W	
R020	1-249-420-11	CARBON 1.8K 5% 1/4W		R214	1-249-429-11	CARBON 10K 5% 1/4W	
R021	1-249-433-11	CARBON 22K 5% 1/4W		R251	1-249-441-11	CARBON 100K 5% 1/4W	
R022	1-249-433-11	CARBON 22K 5% 1/4W		R253	1-249-418-11	CARBON 1.2K 5% 1/4W	
				R254	1-249-385-11	CARBON 2.2 5% 1/4W	
				R255	1-249-397-11	CARBON 22 5% 1/4W	
				R257	1-249-429-11	CARBON 10K 5% 1/4W	
				R266	1-249-441-11	CARBON 100K 5% 1/4W	
				R302	1-249-419-11	CARBON 1.5K 5% 1/4W	
				R303	1-249-417-11	CARBON 1K 5% 1/4W	
				R304	1-247-899-11	CARBON 680K 5% 1/4W	
				R305	1-247-704-11	CARBON 220 5% 1/4W	

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R306	1-247-704-11	CARBON	220 5% 1/4W	R833	1-212-865-51	FUSIBLE	22 5% 1/4W F
R307	1-247-704-11	CARBON	220 5% 1/4W	R836	1-249-437-11	CARBON	47K 5% 1/4W
R308	1-247-703-11	CARBON	180 5% 1/4W	R851	1-249-382-11	CARBON	1.2 5% 1/4W F
R309	1-249-425-11	CARBON	4.7K 5% 1/4W	R852	1-215-869-11	METAL OXIDE	1K 5% 1W F
R310	1-249-413-11	CARBON	470 5% 1/4W	R853	1-249-377-11	CARBON	0.47 5% 1/4W F
R311	1-215-455-00	METAL	27K 1% 1/6W	R854	1-249-377-11	CARBON	0.47 5% 1/4W F
R312	1-249-751-11	CARBON	3.3M 5% 1/4W	R855	1-202-826-00	SOLID	4.7K 10% 1/2W
R313	1-247-707-11	CARBON	390 5% 1/4W	R856	1-249-426-11	CARBON	5.6K 5% 1/4W
R314	1-249-437-11	CARBON	47K 5% 1/4W	R857	1-247-881-00	CARBON	120K 5% 1/4W
R315	1-249-413-11	CARBON	470 5% 1/4W	R858	1-216-446-00	METAL OXIDE	18 5% 2W F
R316	1-249-412-11	CARBON	390 5% 1/4W	R859	1-216-431-11	METAL OXIDE	560 5% 1W F
R317	1-249-417-11	CARBON	1K 5% 1/4W	R860	1-247-883-00	CARBON	150K 5% 1/4W
R318	1-249-417-11	CARBON	1K 5% 1/4W	R861	1-247-883-00	CARBON	150K 5% 1/4W
R319	1-249-433-11	CARBON	22K 5% 1/4W	R862	1-249-441-11	CARBON	100K 5% 1/4W
R320	1-249-409-11	CARBON	220 5% 1/4W	R863	1-247-903-00	CARBON	1M 5% 1/4W
R322	1-249-433-11	CARBON	22K 5% 1/4W	R864	1-249-455-11	CARBON	4.7 5% 1/4W F
R324	1-247-891-00	CARBON	330K 5% 1/4W	R865	1-249-377-11	CARBON	0.47 5% 1/4W F
R325	1-249-441-11	CARBON	100K 5% 1/4W				
R326	1-247-887-00	CARBON	220K 5% 1/4W				
R330	1-249-469-11	CARBON	100K 5% 1/4W				
R506	1-249-405-11	CARBON	100 5% 1/4W				
R507	1-247-713-11	CARBON	1K 5% 1/4W				
R517	1-249-429-11	CARBON	10K 5% 1/4W				
R518	1-247-722-11	CARBON	5.6K 5% 1/4W				
R520	1-249-414-11	CARBON	560 5% 1/4W				
R521	1-249-431-11	CARBON	15K 5% 1/4W				
R522	1-249-409-11	CARBON	220 5% 1/4W				
R532	1-247-706-11	CARBON	330 5% 1/4W				
R551	1-247-724-11	CARBON	8.2K 5% 1/4W				
R552	1-215-867-00	METAL OXIDE	470 5% 1W F				
R556	1-247-744-11	CARBON	270 5% 1/2W				
R557	1-216-352-11	METAL OXIDE	1.8 5% 1W F				
R558	1-249-433-11	CARBON	22K 5% 1/4W				
R559	1-249-418-11	CARBON	1.2K 5% 1/4W				
R560	1-249-405-11	CARBON	100 5% 1/4W				
R561	1-249-417-11	CARBON	1K 5% 1/4W				
R601	1-215-915-11	METAL OXIDE	470 5% 3W F				
R602	1-205-949-11	WIREWOUND	1.8 5% 10W				
R603	1-249-485-11	CARBON	8.2 5% 1/2W F				
R604	1-214-929-00	CARBON	470K 5% 1/2W				
R605	1-205-949-11	WIREWOUND	1.8 5% 10W F				
R607	1-249-443-11	CARBON	0.47 5% 1/4W F				
R609	1-215-908-00	METAL OXIDE	33 5% 3W F				
R613	1-249-447-11	CARBON	1 5% 1/4W F				
R615	1-249-472-11	CARBON	0.68 5% 1/2W F				
R801	1-249-426-11	CARBON	5.6K 5% 1/4W				
R803	1-215-922-11	METAL OXIDE	6.8K 5% 3W F				
R804	1-247-721-11	CARBON	4.7K 5% 1/4W F				
R805	1-249-433-11	CARBON	22K 5% 1/4W				



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<CRYSTAL>				T402	1-404-496-00	COIL	
X001	1-577-619-11	VIBRATOR, CRYSTAL		T403	1-404-584-11	COIL	
X301	1-577-611-11	OSCILALTOR, CERAMIC		*****			
X358	1-567-505-11	OSCILLATOR, CRYSTAL		*A-1330-984-A C BOARD, COMPLETE			
X443	1-567-504-11	OSCILLATOR, CRYSTAL		*****			
<MODULE>				*1-506-371-00	PIN, CONNECTOR 2P		
YCM301	1-235-833-11	YC MODULE		*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P		
YCM302	1-236-228-11	FILTER MODULE		1-526-814-11	SOCKET, PICTURE TUBE		
*****				*1-564-509-11	PLUG, CONNECTOR 6P		
*1-630-438-11	SC BOARD			<CAPACITOR>			
*****				C701	1-102-112-00	CERAMIC	330PF 10% 50V
*1-565-483-11	CONNECTOR, BOARD TO BOARD 7P			C702	1-102-112-00	CERAMIC	330PF 10% 50V
<CAPACITOR>				C703	1-102-113-00	CERAMIC	390PF 10% 50V
C401	1-124-477-11	ELECT	47MF 20% 16V	C704	1-123-875-11	ELECT	10MF 20% 50V
C402	1-101-004-00	CERAMIC	0.01MF 50V	C705	1-101-006-00	CERAMIC	0.047MF 50V
C403	1-101-890-00	CERAMIC	75PF 5% 50V	C706	1-123-875-11	ELECT	10MF 20% 50V
C404	1-102-961-00	CERAMIC	27PF 5% 50V	C707	1-129-718-00	FILM	0.022MF 10% 630V
C405	1-136-165-00	FILM	0.1MF 5% 50V	C708	1-162-116-00	CERAMIC	680PF 10% 2KV
C406	1-102-816-00	CERAMIC	120PF 5% 50V	<COIL>			
C407	1-124-791-11	ELECT	1MF 20% 50V	L701	1-408-423-00	INDUCTOR	150UH
C408	1-108-689-11	MYLAR	0.0056MF 5% 50V	<TRANSISTOR>			
C409	1-101-004-00	CERAMIC	0.01MF 50V	Q701	8-729-906-38	TRANSISTOR	2SC3271-N
C410	1-102-816-00	CERAMIC	120PF 5% 50V	Q702	8-729-906-38	TRANSISTOR	2SC3271-N
C411	1-136-165-00	FILM	0.1MF 5% 50V	Q703	8-729-906-38	TRANSISTOR	2SC3271-N
C412	1-102-959-00	CERAMIC	22PF 5% 50V	<RESISTOR>			
C413	1-101-890-00	CERAMIC	75PF 5% 50V	R701	1-249-414-11	CARBON	560 5% 1/4W
C414	1-102-816-00	CERAMIC	120PF 5% 50V	R702	1-249-422-11	CARBON	2.7K 5% 1/4W
C415	1-136-165-00	FILM	0.1MF 5% 50V	R703	1-247-700-11	CARBON	100 5% 1/4W
C416	1-102-973-00	CERAMIC	100PF 5% 50V	R704	1-249-421-11	CARBON	2.2K 5% 1/4W
<IC>				R705	1-249-412-11	CARBON	390 5% 1/4W
IC401	8-752-036-22	IC CXA1214P		R706	1-249-422-11	CARBON	2.7K 5% 1/4W
<COIL>				R707	1-249-413-11	CARBON	470 5% 1/4W
L401	1-408-411-00	INDUCTOR	15UH	R708	1-249-405-11	CARBON	100 5% 1/4W
L402	1-408-411-00	INDUCTOR	15UH	R709	1-249-422-11	CARBON	2.7K 5% 1/4W
<TRANSISTOR>				R710	1-249-412-11	CARBON	390 5% 1/4W
Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE		R711	1-249-423-11	CARBON	3.3K 5% 1/4W
<RESISTOR>				R712	1-249-411-11	CARBON	330 5% 1/4W
R401	1-247-704-11	CARBON	220 5% 1/4W	R713	1-249-429-11	CARBON	10K 5% 1/4W
R402	1-249-412-11	CARBON	390 5% 1/4W	R714	1-247-700-11	CARBON	100 5% 1/4W
R403	1-249-412-11	CARBON	390 5% 1/4W	R715	1-202-824-00	SOLID	3.3K 10% 1/2W
R404	1-249-408-11	CARBON	180 5% 1/4W	R716	1-215-924-00	METAL OXIDE	15K 5% 3W F
R405	1-249-417-11	CARBON	1K 5% 1/4W	R717	1-202-824-00	SOLID	3.3K 10% 1/2W F
R406	1-247-717-11	CARBON	2.2K 5% 1/4W	R718	1-215-924-00	METAL OXIDE	15K 5% 3W F
R407	1-247-903-00	CARBON	1M 5% 1/4W	R719	1-202-824-00	SOLID	3.3K 10% 1/2W F
<TRANSFORMER>				R720	1-215-924-00	METAL OXIDE	15K 5% 3W F
T401	1-404-496-00	COIL		R722	1-202-837-00	SOLID	82K 10% 1/2W
				R723	1-202-846-00	SOLID	470K 10% 1/2W
				R724	1-202-848-00	SOLID	680K 10% 1/2W
				R725	1-202-843-11	SOLID	270K 10% 1/2W
				R726	1-202-719-00	SOLID	1M 10% 1/2W
				R727	1-202-814-11	SOLID	33K 10% 1/2W
				R728	1-216-391-11	METAL OXIDE	1.5 5% 3W
				R729	1-202-842-11	SOLID	220K 10% 1/2W
				R730	1-202-549-00	SOLID	100 10% 1/2W
				R731	1-249-405-11	CARBON	100 5% 1/4W



The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R732	1-249-405-11	CARBON	100 5% 1/4W	R123	1-249-396-11	CARBON	18 5% 1/4W
R733	1-249-405-11	CARBON	100 5% 1/4W	R130	1-249-434-11	CARBON	27K 5% 1/4W
<VARIABLE RESISTOR>				R131	1-249-438-11	CARBON	56K 5% 1/4W
RV701	1-228-992-11	RES, ADJ, CARBON 3.3K		R132	1-249-396-11	CARBON	18 5% 1/4W
RV702	1-228-992-11	RES, ADJ, CARBON 3.3K		<TRANSFORMER>			
RV703	1-228-992-11	RES, ADJ, CARBON 3.3K		T101	1-421-823-11	TRANSFORMER, PULSE	
RV704	1-228-992-11	RES, ADJ, CARBON 3.3K		*****			
RV705	1-228-992-11	RES, ADJ, CARBON 3.3K		MISCELLANEOUS			
RV706	1-228-995-00	RES, ADJ, CARBON 22K		*****			
RV707 Δ	1-230-641-21	RES, ADJ, METAL GLAZE 2.2M		Δ 1-426-307-11	COIL, DEMAGNETIZATION		
RV708	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M		Δ 1-451-279-21	DEFLECTION Yoke (Y19PXA)		
RV709	1-230-798-11	RES, ADJ, METAL GLAZE 90M		1-452-032-00	MAGNET, DISK; 10MM ϕ		
*****				1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ		
*1-630-437-11	K BOARD			1-452-277-00	MAGNET, BMC		
*****				1-544-190-11	SPEAKER		
Δ 1-537-249-11	TERMINAL BOARD, ANTENNA			Δ 1-574-062-22	CORD, POWER (WITH CONNECTOR)		
*1-564-505-11	PLUG, CONNECTOR 2P			*1-575-691-11	CABLE, PIN		
*1-564-508-11	PLUG, CONNECTOR 5P			V901 Δ 8-737-951-05	PICTURE TUBE (A46JNL10X)		
<MODULE>				*****			
AVM1	1-808-809-11	MODULE, VIDEO INSULATED (IVM-2)		ACCESSORIES AND PACKING MATERIALS			
AVM2	1-235-784-12	INSULATED MODULE, AUDIO(IAM-1)		*****			
<CAPACITOR>				PART NO.	DESCRIPTION	REMARK	
C100 Δ	1-164-002-51	CERAMIC	330PF 20% 400V	Δ 1-417-149-11	MIXER, U/V		
C101 Δ	1-164-002-51	CERAMIC	330PF 20% 400V	1-417-154-11	MATCHING TRANSFORMER, ANTENNA		
C102 Δ	1-164-002-51	CERAMIC	330PF 20% 400V	1-465-316-11	REMOTE COMMANDER (RM-687C)		
C110	1-124-120-11	ELECT	220MF 20% 25V	1-501-372-21	ANTENNA, TELESCOPIC		
C111	1-162-318-11	CERAMIC	0.001MF 10% 500V	1-506-401-31	ADAPTOR, CONVERSION		
C112 Δ	1-162-578-51	CERAMIC	0.0047MF 20% 400V	3-751-063-41	MANUAL, INSTRUCTION		
C113 Δ	1-162-578-51	CERAMIC	0.0047MF 20% 400V	*4-392-859-01	BAG, PROTECTION		
C120	1-124-477-11	ELECT	47MF 20% 16V	*4-397-462-01	CUSHION (UPPER) (ASSY)		
C121	1-126-101-11	ELECT	100MF 20% 16V	*4-397-463-01	CUSHION (LOWER) (ASSY)		
C122	1-126-101-11	ELECT	100MF 20% 16V	*4-397-464-01	INDIVIDUAL CARTON		
C123	1-124-477-11	ELECT	47MF 20% 16V				
C130	1-124-902-00	ELECT	0.47MF 20% 50V				
C131	1-126-101-11	ELECT	100MF 20% 16V				
C132	1-126-101-11	ELECT	100MF 20% 16V				
C133	1-124-477-11	ELECT	47MF 20% 16V				
C134	1-126-101-11	ELECT	100MF 20% 16V				
<DIODE>							
D100	8-719-300-33	DIODE RU-3AM					
D120	8-719-016-42	DIODE MC932					
D130	8-719-016-42	DIODE MC932					
<IC>							
IC101	8-759-982-25	IC RC78L09A					
<RESISTOR>							
R110	1-249-377-11	CARBON	0.47 5% 1/4W F				
R111 Δ	1-247-289-11	CARBON	8.2M 5% 1W				
R120	1-249-404-00	CARBON	82 5% 1/4W				
R121	1-249-401-11	CARBON	47 5% 1/4W				
R122	1-249-396-11	CARBON	18 5% 1/4W				